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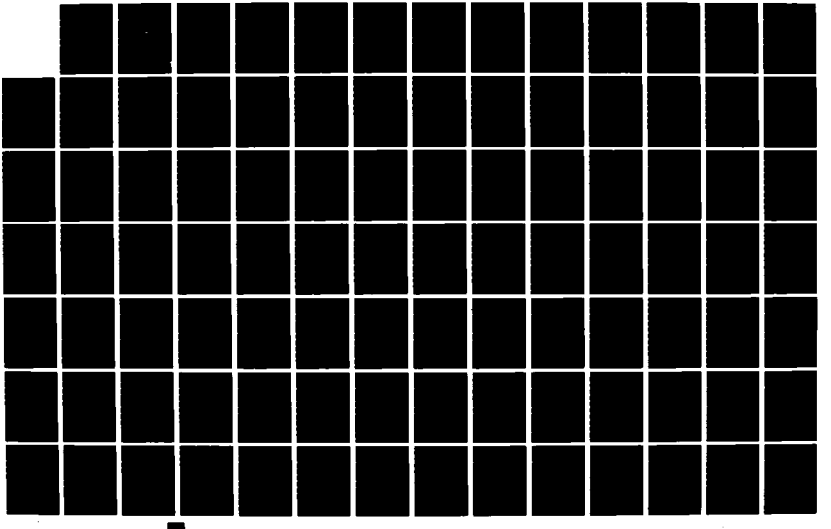

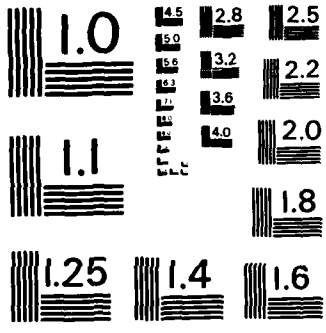

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NAVAL POSTGRADUATE SCHOOL
Monterey, California

THESIS

MICROCOMPUTER-BASED DETACHMENT ADMINISTRATIVE MANAGEMENT SYSTEM FOR THE LAMPS COMMUNITY. A REQUIREMENTS ANALYSIS.

by

Gregory F. Smith

September 1985

THESIS ADVISOR: Jack LaPatra

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

This thesis presents a requirements analysis of a micro-computer based system to be used by sea-going Light Airborne Multi-purpose System (LAMPS) detachment for administrative data management and recurring reports generation. Included are the results of user interviews which were conducted to determine possible system functions. These functions, through analysis, are presented in a hierarchical charting with data flow diagrams and accompanying processing narratives. System data is then presented in data dictionary format. Recommendations are made as to possible system implementation and design.

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Microcomputer-Based Detachment Administrative Management System for the LAMPS Community. A Requirements Analysis.

by

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Submitted in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE IN INFORMATION SYSTEMS

from the

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ABSTRACT

This thesis presents a requirements analysis of a microcomputer based system to be used by sea-going Light Airborne Multi-purpose System (LAMPS) detachments for administrative data management and recurring reports generation. Included are the results of user interviews which were conducted to determine possible system functions. These functions, through analysis, are presented in a hierarchical charting with data flow diagrams and accompanying processing narratives. System data is then presented in data dictionary format. Recommendations are made as to possible system implementation and design.

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I. INTRODUCTION

A. GENERAL

This thesis was conceived as a result of the Navy-wide increase in the issue and use of microcomputers. It will present the design of a microcomputer-based system for a particular fleet application--that of file-keeping and report generation to satisfy the needs of a seagoing detachment of the Light Airborne Multi-purpose System (LAMPS) community.

In October 1983, a joint Air Force / Navy contract [Ref.1] was let to the Zenith Data Corporation to purchase Z-120's as the Navy's standard desktop computer. The contract has been extended several times and expanded to include Z-150's. Recently, another Air Force / Navy contract [Ref.2] was let to Federal Data Corporation for the purchase of up to 36,000 portable Seequa Chameleon XL's. Commander Anti-submarine Warfare Wings Pacific forwarded a Mission Element Need Statement (MENS) [Ref.3] to Commander Naval Air Forces Pacific in November 1984 identifying the need to furnish LAMPS detachments with micro-computers. Although no explicit hardware specification is made in this thesis, the Zenith contracts were cited in this MENS and have been taken into account, and hardware configurations

already implemented at the squadron level have been considered.

B. RESEARCH OBJECTIVES

This thesis will formally represent users' functional requirements in a logical design for an administrative reports and record-keeping system to be used by seagoing LAMPS detachments. It will explore the following research questions:

1. What are the functional requirements of a fleet detachment in terms of automated reporting and record-keeping ?

2. How can LAMPS detachments effectively use a standard micro-computer to store, access, and manipulate the large volume of flight, maintenance, training, and personnel data to satisfy fleet operational and administrative reporting and record-keeping ?

3. How can a design to satisfy these requirements be implemented using off-the-shelf software, thus minimizing development costs ?

The bulk of this presentation will be a requirements analysis of a detachment file management system: functional descriptions, data flows, data definitions, and outputs. Functions are identified and explained using a structured analysis technique. This technique involves hierarchical organization and decomposition of the major system functions. The function narratives describe these functions in detail. Data flow diagrams are then constructed using the method outlined by Science Research Associates. [Ref.4] A

data dictionary follows, depicting each data element in detail.

No attempt has been made to code the system. It is the author's desire that this requirements analysis will be followed by future projects to bring about its full implementation. Recommendations are made throughout concerning appropriate off-the-shelf software that can and should be used for the system as well as to manage the system in an operational detachment.

Benefits to be realized through the use of this system are illustrated in Chapter II, although no formal cost/benefit analysis is presented. The system presented should help realize those benefits noted in [Ref.3].

C. SCOPE

The scope of this thesis will be limited to a functional description and logical design of an administrative data management and reports generation system for general use with LAMPS detachments.

D. METHODOLOGY

The requirements described in this thesis were determined through a series of interviews with experienced LAMPS officers, mostly Officers-in-Charge and Maintenance Officers. An Officer-in-Charge of a LAMPS detachment has overall responsibility for the detachment, and is best

suited to prescribe how administrative requirements should be handled, while the Maintenance Officer does most of the record-keeping for the detachment. These interviews were conducted during face-to-face sessions at operational squadrons at NAS North Island, San Diego, and through telephone conversations with officers stationed in operational squadrons in Norfolk, Virginia.

Only officers were interviewed. On most detachments the officers prepare the reports. Some detachments may employ enlisted members to do various administrative tasks, but enlisted inputs were not solicited.

Twelve officers were interviewed. Due to the limited nature of the application and the standardization of LAMPS reporting requirements, many of their responses as to functional needs were duplicates. Therefore, this sample was considered adequate. As a former Officer-in-Charge, the author draws on personal experience as well. A sample of interview questions is contained in Appendix A.

Once the functional specifications were grouped from their responses, a logical system hierarchy was drawn. The format for this analysis is taken from Pressman [Ref. 5].

E. ASSUMPTIONS

Several assumptions have been used throughout the system development:

1. the reader is unfamiliar with LAMPS.

   This is not considered critical as the technical details of LAMPS operations are not considered. A brief description of LAMPS organization is provided for a conceptual framework.

2. the reader has a general understanding of the software development life-cycle as outlined in Pressman, SRA, Boehm [Ref.6] and others.

3. the system will be micro-computer based.

4. the end-user (operational LAMPS personnel) has little or no experience with micro-computers.

   Throughout the design process, it is assumed that the end product will be completely menu-driven and as user-friendly as possible.

5. the system must be able to handle classified data.

   Although this thesis is unclassified, material contained in the Rainform Purple and CRUISEREP sections is classified. This material was not specified in the data dictionary or data descriptions to preserve this work's unclassified status.

II. BACKGROUND

The following background information is provided as a conceptual framework for this application.

A. GENERAL DESCRIPTION

There are currently two subdivisions of the LAMPS community--LAMPS Mk I, which flies the Kaman SH-2F helicopter, and the more recently formed Mk III, which flies the Sikorsky SH-60B. In both divisions the missions are the same: Anti-submarine Warfare (ASW), Anti-ship Surveillance and Targeting (ASST), and other secondary missions including Search and Rescue (SAR) and utility.

The "system" consists of the LAMPS helicopter and crew, and any of a number of combatants with which they may be deployed. In essence, LAMPS greatly extends the detection and attack limits of its host ship by providing over-the-horizon capabilities. It can link information to its parent ship from a variety of on-board sensors enabling the ship to generate targeting solutions and conduct intelligence gathering. The helicopter is also a self-contained weapon system capable of generating its own solutions and conducting attacks.

B. LAMPS ORGANIZATION

A LAMPS squadron is a "detachment-based" squadron. Its helicopters and personnel are organized into detachments for individual deployment to various ships. The entire squadron does not deploy as a single unit. A typical squadron maintains nine to ten detachments and a "homeguard" organization for their support.

The typical detachment is organized as follows:

1. Four pilots.

   a. Officer-in-Charge. (OIC)

      Formulates and enforces detachment policy and maintains overall responsibility for the detachment. Serves as the Aviation Department Head aboard the ship and is spokesman for the detachment in all matters.

   b. Maintenance Officer. (MO)

      Serves as the detachment division officer and is responsible for day-to-day maintenance of the helicopter. Maintains aircraft logs and records and formulates periodic maintenance reports.

   c. Operations/Communications Officer.

      Schedules all operations concerning LAMPS. Maintains flight schedules and flight history of the detachment and usually drafts all operations reports.

   d. Training/Admin Officer.

      Schedules and tracks required training of detachment members and is responsible for routine administrative reporting and record-keeping.

2. Crew Leader.

   Usually the senior enlisted member of the detachment. Works with maintenance officer to schedule and perform

maintenance on the aircraft, and handles most crew matters.

3. Crew.

The enlisted men who perform maintenance on the aircraft and fly as aircrew. Usually 10-13 per detachment.

While deployed, the detachment becomes the Air Department within the ship's organization, and the ship's commanding officer assumes responsibility for the safety of the detachment and its general administration.

C. REPORTING REQUIREMENTS

While deployed, the detachment is required to generate recurring reports to a variety of sources in addition to the reports issued by the ship. These reports fall into three general categories: Operational/Flight reports, Maintenance reports, and Combined reports. All of the reports contain compiled data, and their formulation is a tedious and time-consuming task requiring meticulous record keeping. Since detachments have no assigned administrative personnel, these reports are generated by the pilots and maintenance men. The data fields are often duplicated in different reports, and duplicate data is often maintained in several different files. The composition of these reports and their periodicity are contained in Appendix B.

File-keeping on detachments is primarily a manual process. In addition to the duplication of data discussed

above, maintenance of the data by different officers often leads to the introduction of errors. Data is often cross-checked by home units when compiling composite reports. Both HSL-35 and HSL-32, (operational LAMPS squadrons), report a number of errors when cross-referencing detachment operational data and maintenance data. This implies that the reporting officers are maintaining their own data and that data integrity suffers as a result.

D. AUTOMATION REQUIREMENTS

The burdensome record-keeping and reporting tasks of Naval Aviation maintenance and operations have been identified as creating inefficiencies that detract from a squadron's ability to perform its primary mission in the Mission Element Need Statements (MENS) of several computer-based systems that have been proposed to automate these processes.

The Naval Aviation Logistic Command Management Information System (NALCOMIS) project was approved and entered development in 1976. [Ref.6] It was created to automate Naval Aviation Maintenance reporting, record-keeping, and data collection which would encompass not only aircraft carriers, but helicopter carriers, Naval Air Stations, and Marine Corps Air Stations as well. It would automate these functions at both the Organizational and Intermediate levels

of maintenance, and was to run on standard shipboard minicomputers.

The project has suffered several delays, primarily due to a long delay in the award of the standard Shipboard Non-tactical ADP Program (SNAP I) contract. At this time, only the maintenance and supply modules are in prototype at MCAS Cherry Point, North Carolina. LAMPS is not scheduled to receive the system in the forseeable future.

During the delay period, an interim system was developed to track maintenance and logistic functions aboard carriers. This system, the Status Inventory Data Management System (SIDMS), [Ref.7], was to provide real-time monitoring of all repairable actions taking place in the AIMD and logistic support operations in the afloat Supply Support Center of an aircraft carrier. The system has been operational for over three years now aboard carriers, but, again, LAMPS, due to its relatively small scope, is not scheduled to receive this system .

A project request for a SNAP Aviation Maintenance Subsystem (AMS) was submitted in December 1984. [Ref.8] This system, designed to run on the SNAP II hardware available on LAMPS ships, was to: "replace a major portion of the current manual data collection system with an interactive, menu-driven system that provides accurate and timely maintenance information for the embarked aviation detachment and its up-

line reporting requirements." The project has not been funded, however, and has stalled in development.

The Mission Element Needs Statement (MENS), issued by COMASWWINGSPAC in November 1984 [Ref. 3], identifies the need to automate the LAMPS reporting tasks through the use of microcomputers:

> "Administrative burden in the form of recurring reports detract from the accomplishment of the [LAMPS] mission. While all aviation units have similar requirements, the small size of LAMPS detachments increases the per capita burden. This is mitigated only slightly by the fact that each detachment has only one aircraft. A microcomputer system would serve to reduce the time spent generating reports thereby freeing detachment personnel to spend more time performing their primary duties. The spread sheet/data base management capabilities of a microcomputer would also yield more timely and more accurate reports."

Although microcomputers have not yet been issued to LAMPS detachments, they have been issued to operational squadrons for use within the squadrons. Within the control of COMASWWINGSPAC, squadrons are provided with a standard microcomputer and its operating system, a data base management system, (typically dBASE II,) an integrated spread sheet, (typically LOTUS 1-2-3,) and a word processor, (such as WORDSTAR). They are attempting to acquire such systems for all detachments within their command.

Unfortunately, problems with the computers' management have already arisen. During interviews at HSL-33 and HSL-35, squadron officers indicate that squadron personnel designated to operate the computers receive little training, and have used them for only minor applications. While the

Naval Data Automation Command's Small Computer Guideline [Ref.9] states that "local commands are responsible for training . . . it is the user's responsibility to read and understand the necessary manuals prior to operating the small computer," clearly few commands can afford to place a high enough priority on such "catch up" training to be effective. They can rarely spare the people or the time needed to learn sophisticated, relatively user un-friendly software to comfortable levels.

The remaining portions of this thesis reflect, in part, the desires of users to create a detachment reporting system uniquely tailored to the LAMPS community.

III. FUNCTIONAL DESCRIPTION

A. METHOD

The functional design of the reports processing system will be developed using a top-down hierarchical structure. This method is presented in a number of references including Pressman [Ref.5], Yourdon [Ref.10], and DeMarco [Ref.11]. It is the basis of IBM's Hierarchical Input Process Output (HIPO) method of Requirements Analysis [Ref.12]. Discussions with NARDAC San Francisco personnel indicate that this method provides a good visual description of the proposed system.

HIPO consists of overview diagrams, detail diagrams, and hierarchy charts known as Visual Tables of Contents (VTOCs). Each diagram provides a level of definition in the design of the system. Descriptive narratives accompany each functional level describing the function.

B. FUNCTIONAL REQUIREMENTS

The following is a summary of the desirable functions of a detachment micro-computer based administrative management system. It was compiled from responses received during the user interviews. Interview questions are listed in Appendix A.

1. Desired functions

a. Provide a pre-deployment checklist system.

b. Store an Individual Material Readiness Listing (IMRL).

c. Maintain a listing of all detachment members' training qualifications with a query capability.

d. Store all detachment flight information.

e. Store and compile a large volume of maintenance data.

f. Store supply data.

g. Provide tactical decision support.

h. Solve assignment problems.

i. Provide calendar--Julian date conversion.

j. Provide reminder system including reminders for flight-time component replacements, report due dates, and inspection due intervals.

k. Produce recurring reports.

(1) Maintenance.

a. Aircraft Material Readiness Report (AMRR)

b. Aircraft Custody/Status Change Reporting (XRAY)

c. Engine Transaction Report (ETR)

d. End-of-Quarter Report (EOQ)

e. Aircraft Accounting Audit Report.

(2) Flight.

a. Rainform Puroles.

(3) Combined.

a. Ten Day Feeder Reports

b. CRUISEREP.

c. Eight o'clock reports.

2. Discussion

This list contains functions that, while diverse, can be combined in ways that their required data may be shared in several cases. Functions A and B, while easily implemented, are more efficiently handled manually and are not included in this application. Function G has been addressed by Geschke, Bullock, and Widmaer [Ref.13] and is also excluded. Function H has received a thorough treatment from Jones and Dolenti [Ref.14], and will not be discussed. The remaining functions are interrelated in that their supporting data derives from aircraft utilization and personnel activities.

From the above list it has been determined that a database system would best support most of the functions. A database system would most efficiently support the wide diversity of data required while providing a query capability. Kronke [Ref.15] notes several advantages of a database system that would apply to this application:

a. More information from the same amount of data [as a file processing system.]

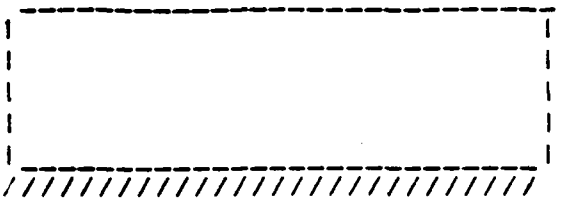
b. New requests and one of a kind requests will be more easily implemented.

c. Elimination of data duplication.

d. Program/data independence.

Each of the major functions will be hierarchically decomposed into subfunctions and described in more detail.

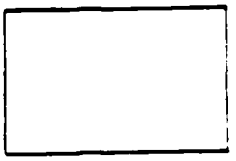
The narratives describe the function and the next level of detail. Boxes marked:



indicate the lowest graphically depicted level.

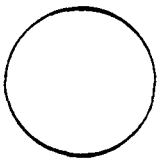
These charts are functional decompositions only. They do not reflect control structures or detailed program design. A data flow diagram will accompany charts of the lowest level functions to depict data sources and flows. Sources for the data fields used in the reports generation are contained in Appendix B.

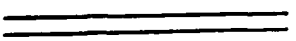
The following legend applies to the data flow diagrams:



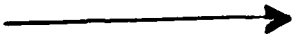
SOURCE or DESTINATION

PROCESS or FUNCTION





DATA SOURCE or SINK



FLOW (arrows indicate direction)

C. HIGH LEVEL FUNCTIONAL DECOMPOSITION

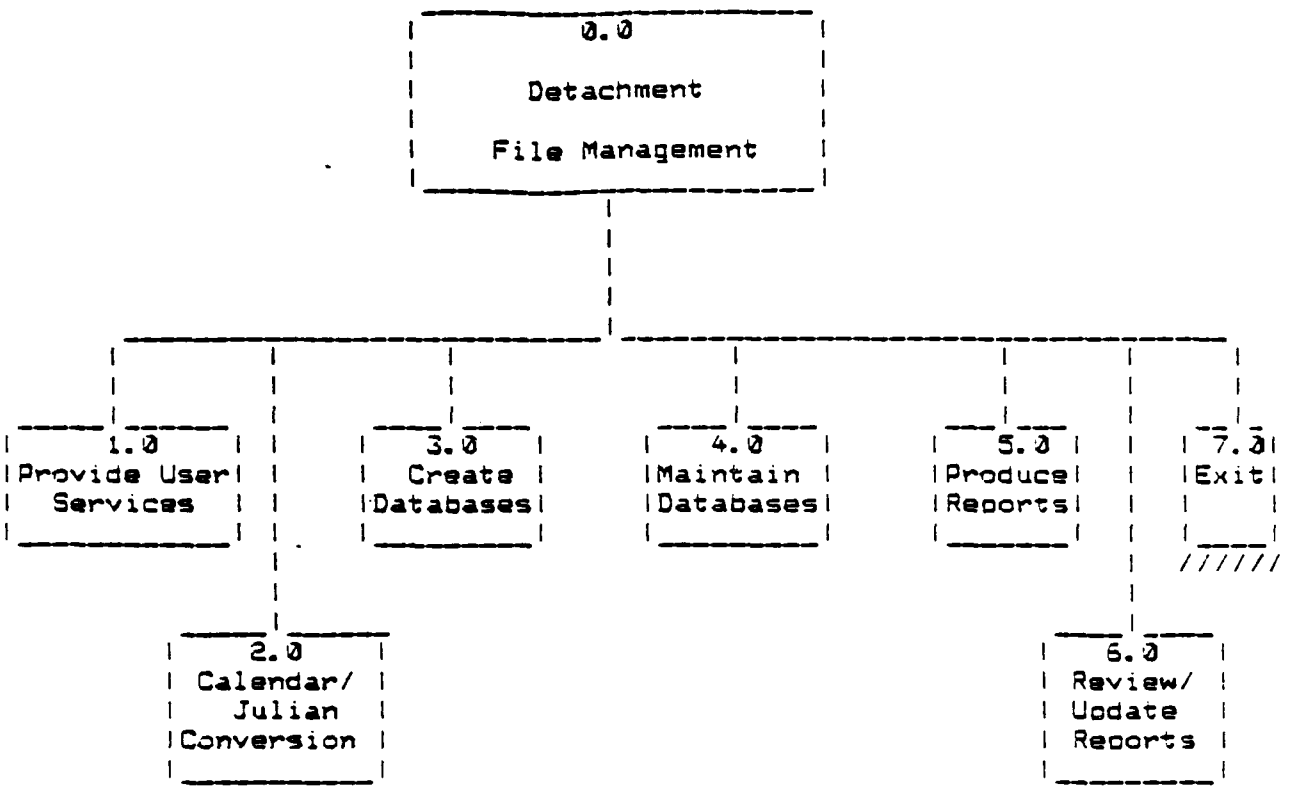


Figure 1

High Level Structure Chart

****

Name: Detachment File Management
Function Identifier: 0.0

Description: This function provides the user with HELP information and reminders, allows maintenance of existing databases, allows for the creation of new databases, generates reports, allows user to review/update reports, performs Calendar/Julian conversion, and provides an exit from the system.

****

Name: Provide User Services
Function Identifier: 1.0

Description: This function provides, upon request, on-line help and provides a reminder system through which scheduled events may be tracked.

****

Name: Calendar/Julian Conversion
Function Identifier: 2.0

Description: This function allows the user to convert calendar dates to Julian format and vice versa.

****

Name: Create Databases
Function Identifier: 3.0

Description: This function allows the user to create databases not provided by the system.

****

Name: Maintain Databases
Function Identifier: 4.0

Description: This function allows the user to enter, delete. and review/update information in pre-structured databases which fall under five major headings: Personnel, Flight, Maintenance, Supply, and Training.

****

The databases used in this system fall under these five major headings. These major categories are compartmentalized into further sub-categories but are not depicted graphically.

****

Name: Produce Reports
Function Identifier: 5.0

Description: This function provides a selection of pre-formatted recurring report templates. The user enters required information. Data is compiled from respective databases and output in the desired report.

****

Name: Review/update Reports
Function Identifier: 6.0

Description: This function allows the user to review a specified report, make changes, if necessary. and refile the report. Also allows the user to input new report formats.

****

Name: Exit
Function Identifier: 7.0
Description: Allows the user to exit the system back to operating system.

1. Provide User Services Functional Decomposition

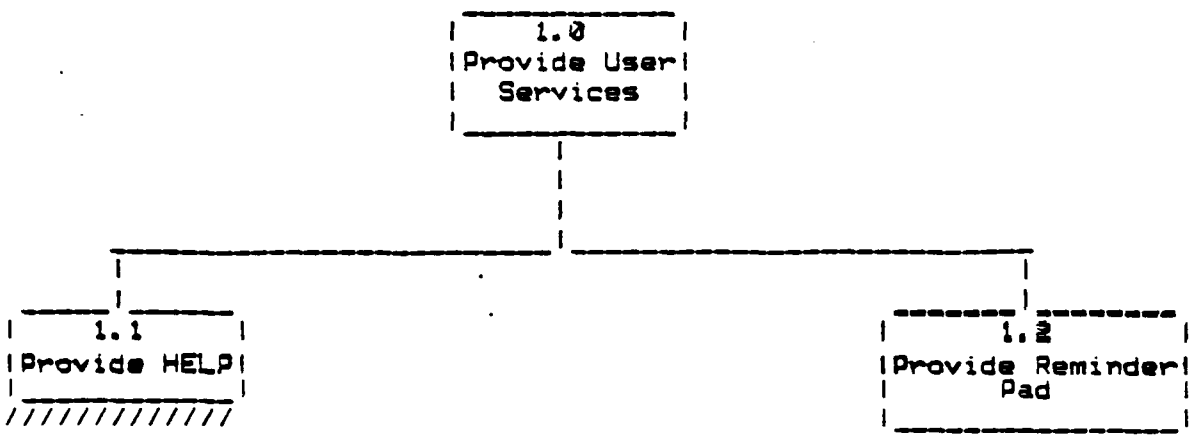


Figure 2

Provide User Services

****

Name: Provide HELP
Function Identifier: 1.1

Description: This function provides on-line documentation for the user to assist him through the various functions of the system. It will provide an introductory chapter and step-by-step instructions through the system. It will also include code tables from the various reports' references.

****

The reminder pad provides the user with pending activities at a glance. The user determines due dates or flight hour intervals for pending activities and enters them into the system. He then specifies the desired number of advance warning days or hours. When requested, the reminder pad will automatically display the reminders he has input along with the correctly updated interval.

****

Name: Provide Reminder Pad
Function Identifier: 1.2

Description: Allows user to check due dates for division officer requirements, reports, high-time component changes, and inspections.

a. Provide Reminder Pad Decomposition

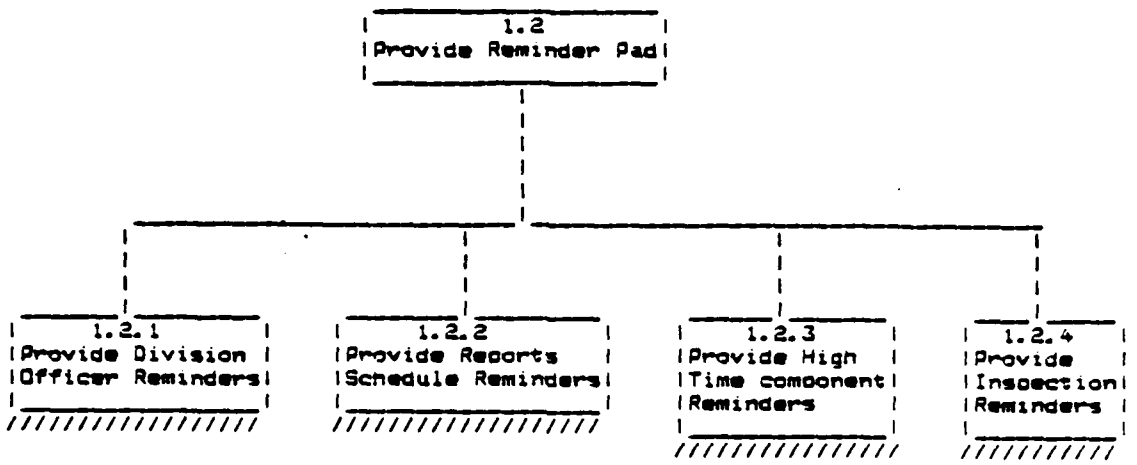


Figure 3

Provide Reminder Pad

****

Name: Provide Division Officer Reminders
Function Identifier: 1.2.1

Description: Provides user with list of reminders and time schedule of division officer responsibilities including evaluations, test periods, etc.

****

Name: Provide Reports Schedule Reminders
Function Identifier: 1.2.2

Description: Provides user with schedule of recurring reports, and time to go until due.

****

Name: Provide High-time component reminders.
Function Identifier: 1.2.3

Description: Provides user with list of high time components, their intervals, and the number of flight hours remaining until replacement is due.

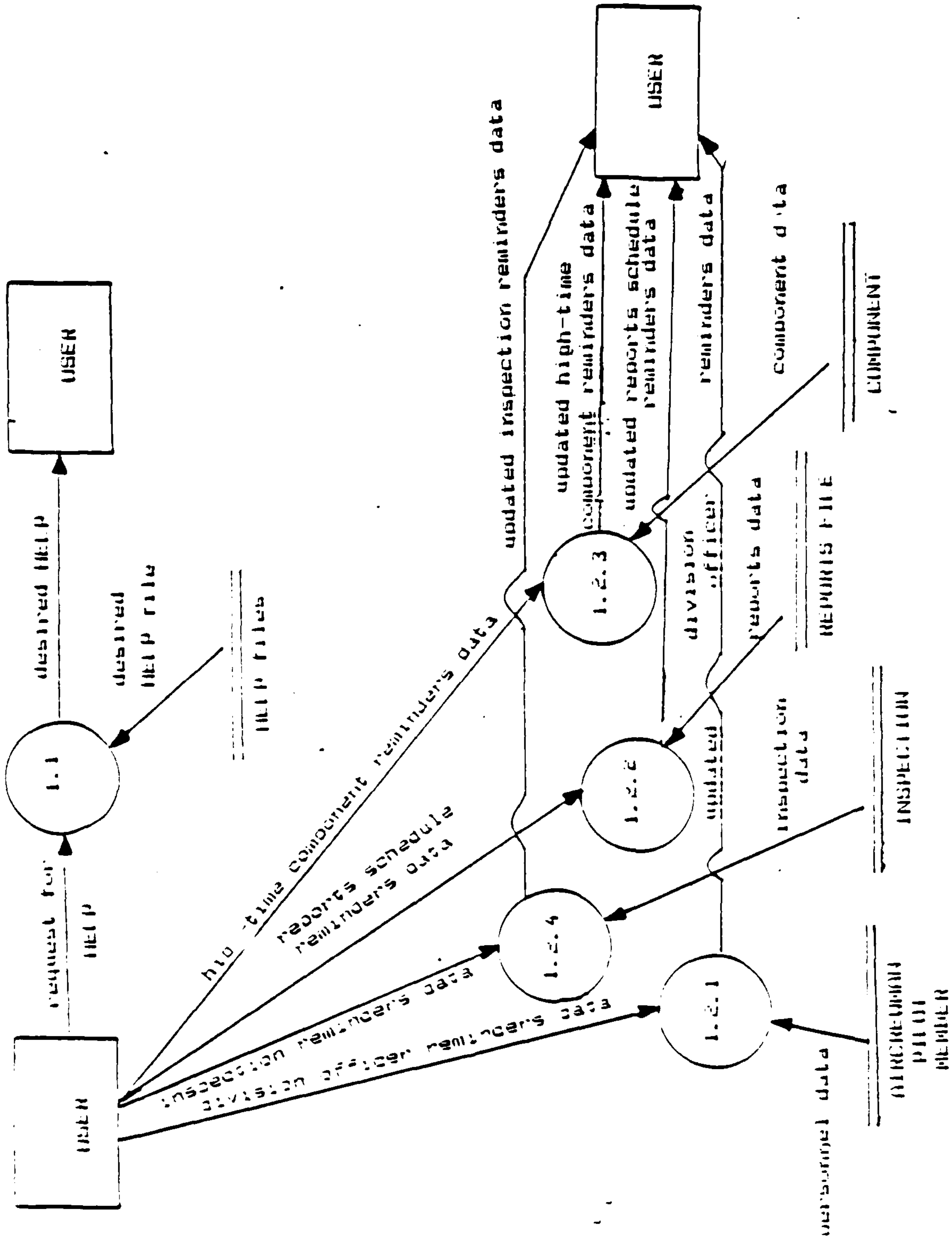


Figure 4
Provide User Services Data Flow Diagram

****

Name: Provide Inspection Reminders
Function Identifier: 1.2.4

Description: Provides user with inspection schedule. Some inspection cycles are based on flight hours, some on calendar intervals. The interval is pre-specified by the user.

2. Calendar/Julian Conversion Functional Decomposition

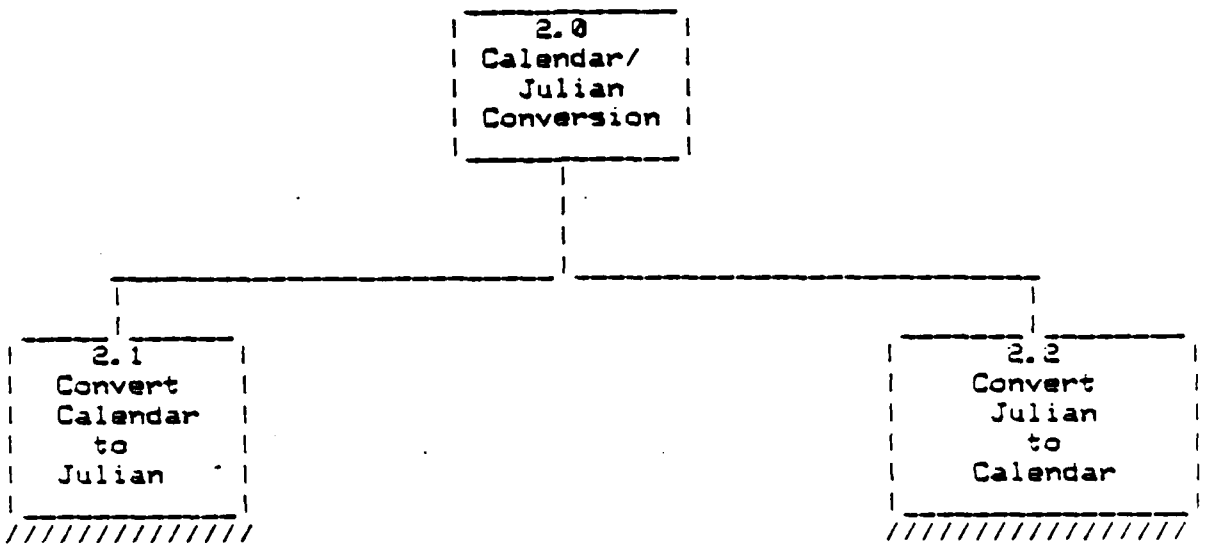


Figure 5

Calendar/Julian Conversion

****

Name: Convert Calendar to Julian
Function Identifier: 2.1

Description: Converts date from MMDDYY format to Julian date format. (YYDDD)

****

Name: Convert Julian to Calendar
Function Identifier: 2.2

Description: Converts Julian date to Calendar date.

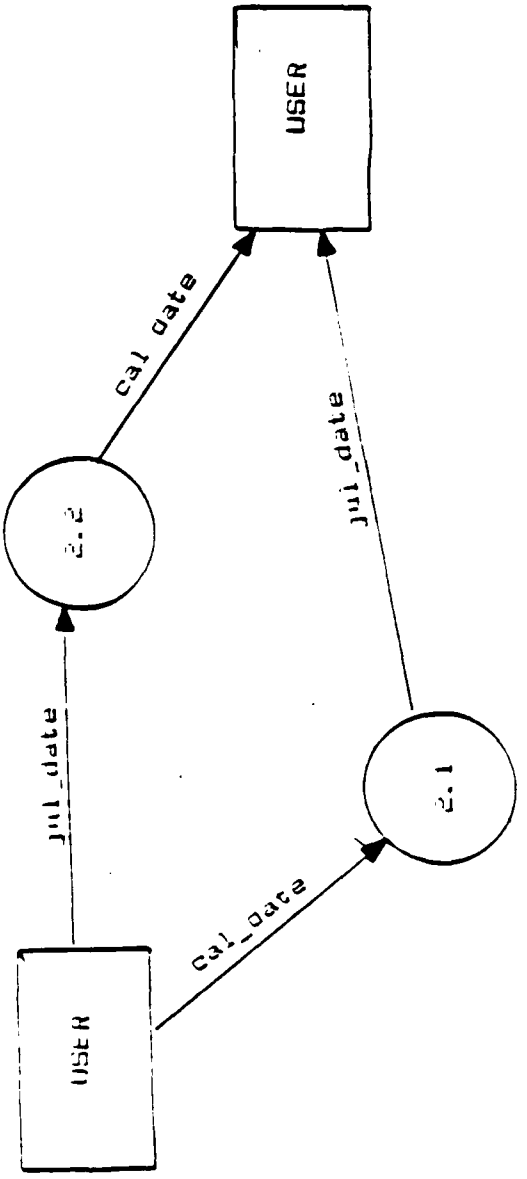


Figure 6
Calendar/Julian Conversion Data Flow Diagram

3. Create Databases Functional Decomposition

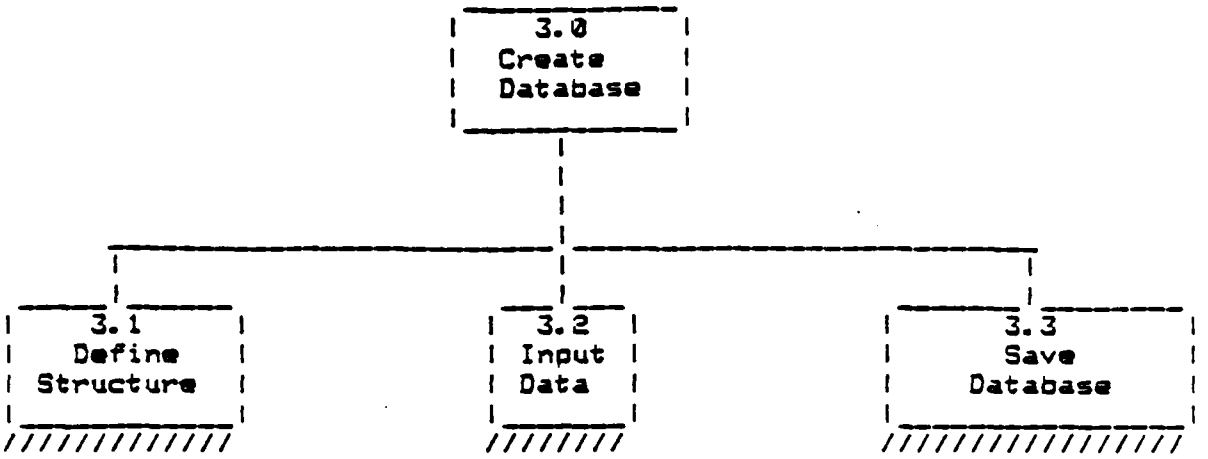


Figure 7

Create Database

****

Name: Define Structure
Function Identifier: 3.1

Description: Allows the user to define the structure of the proposed database. User defines fields, lengths, and keys.

****

Name: Input Data
Function Identifier: 3.2

Description: Called from function 3.1 on request, allows user to input data into newly formed database.

****

Name: Save Database
Function Identifier: 3.3

Description: Allows user to make newly created database structure and data permanent. After the database file is stored it may be accessed by this function in the future.

****

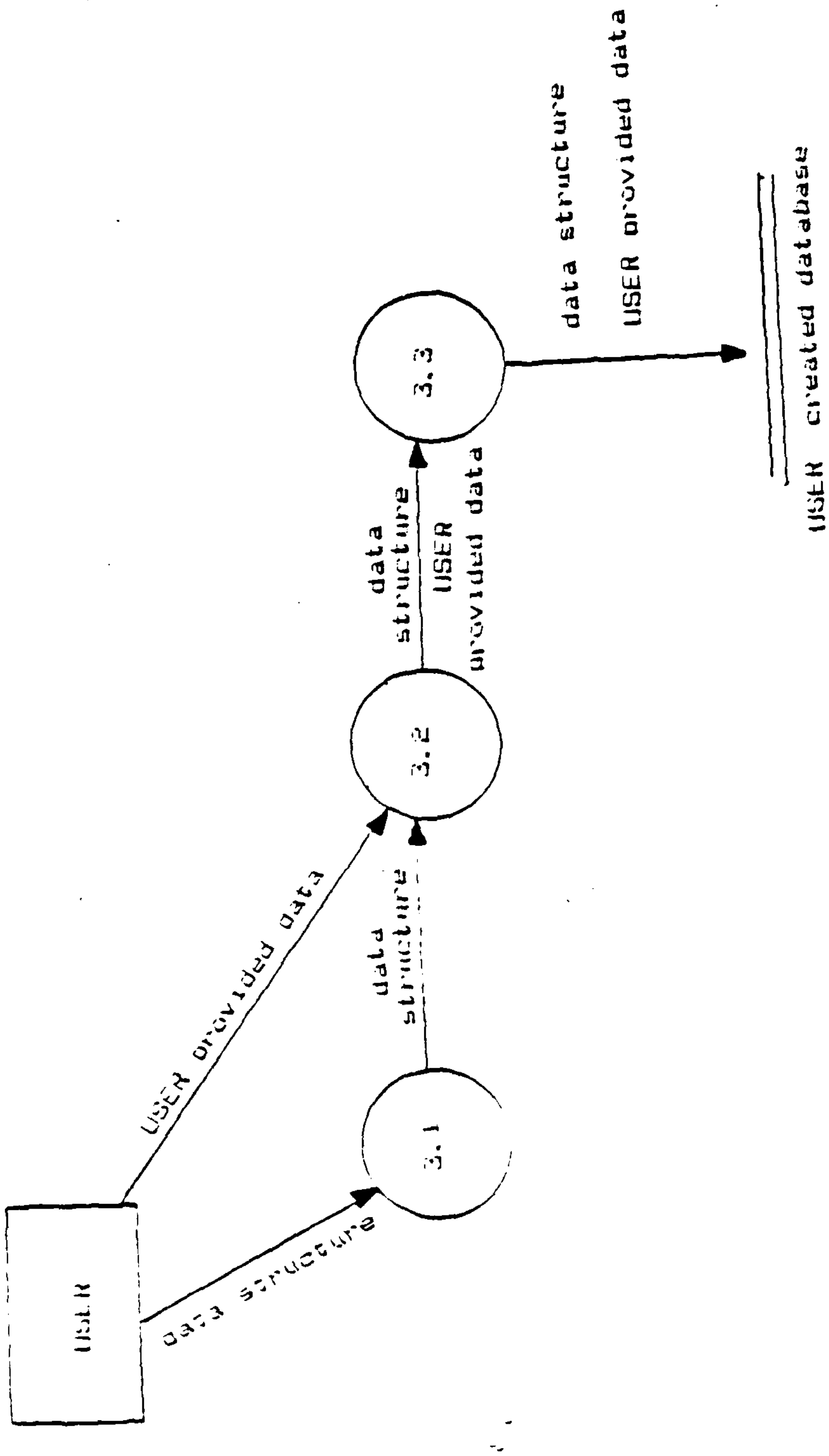


Figure 8
Create Databases Data Flow Diagram

4. Maintain Databases Functional Decomposition

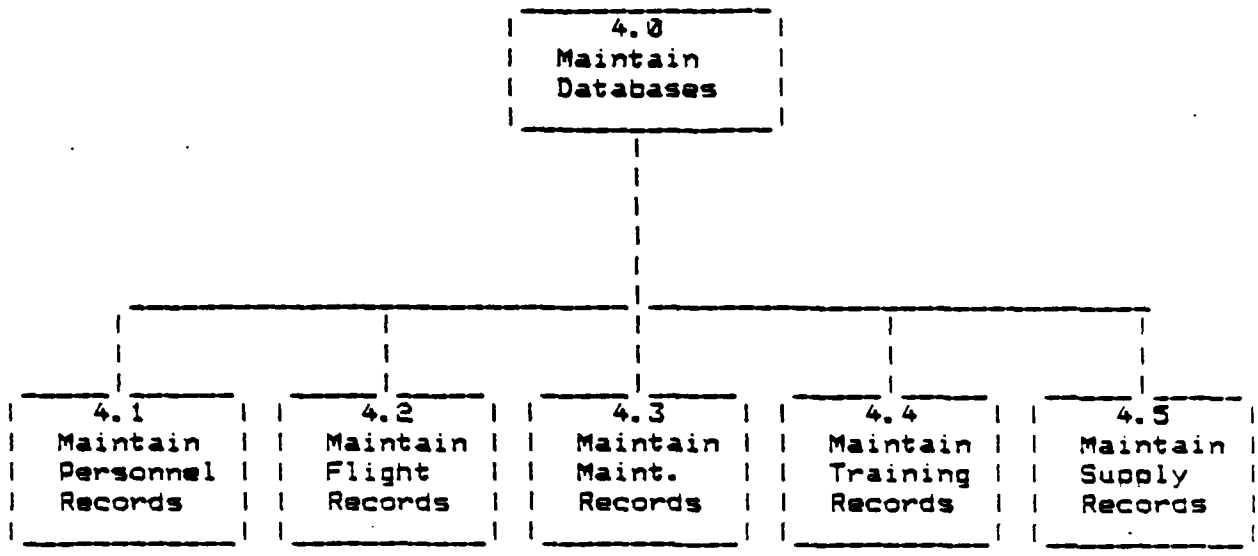


Figure 9

Maintain Databases

****

Name: Maintain Personnel Records
Function Identifier: 4.1

Description: Allows user to enter the pre-structured personnel databases to add, delete, or change data.

****

a. Maintain Personnel Records Decomposition

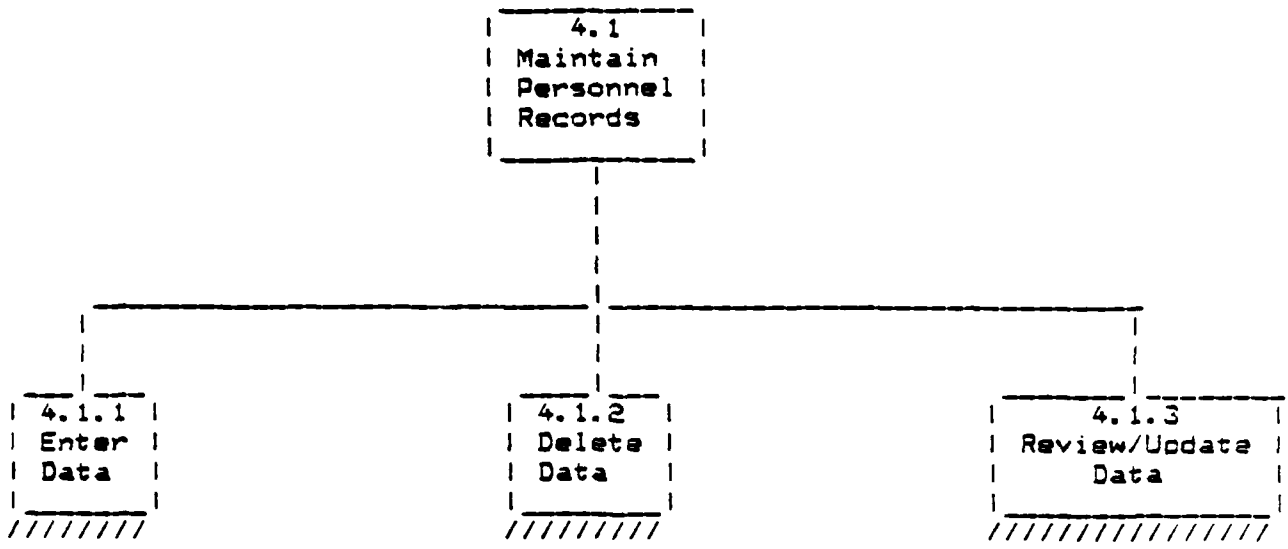


Figure 10

Maintain Personnel Records

****

Name: Enter Data
Function Identifier: 4.1.1

Description: Allows user to enter data into pre-defined data fields.

****

Name: Delete Data
Function Identifier: 4.1.2

Description: Allows user to delete data from the personnel databases. Record numbering adjusted accordingly.

****

Name: Review/update Data
Function Identifier: 4.1.3

Description: Allows the user to review elements in databases and make changes if necessary.

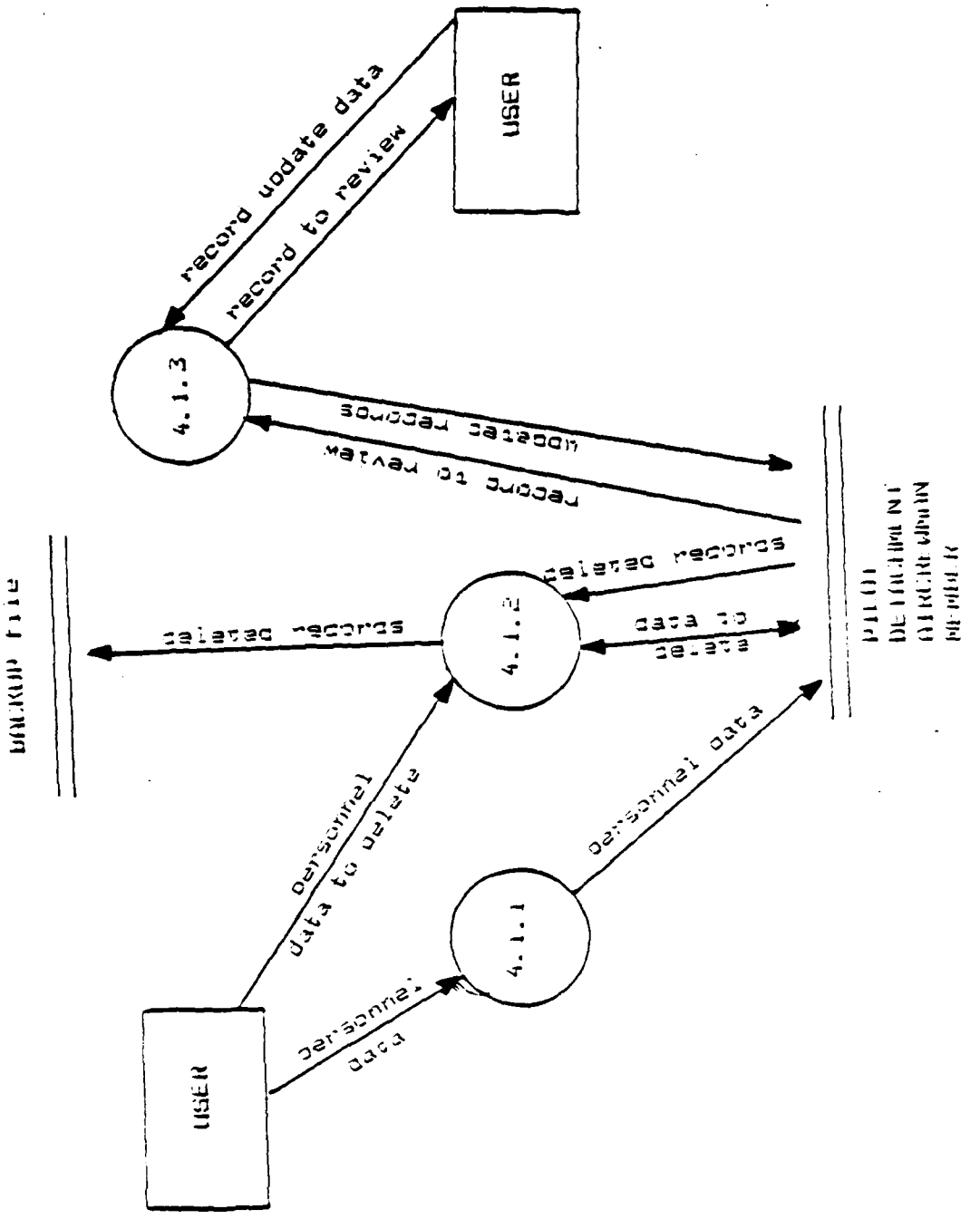


Figure 11
Maintain Personnel Records Data Flow Diagram

****

Name: Maintain Flight Records
Function Identifier: 4.2

Description: Allows user to enter the pre-structured flight databases to add, delete, or change data.

****

b. Maintain Flight Records Decomposition

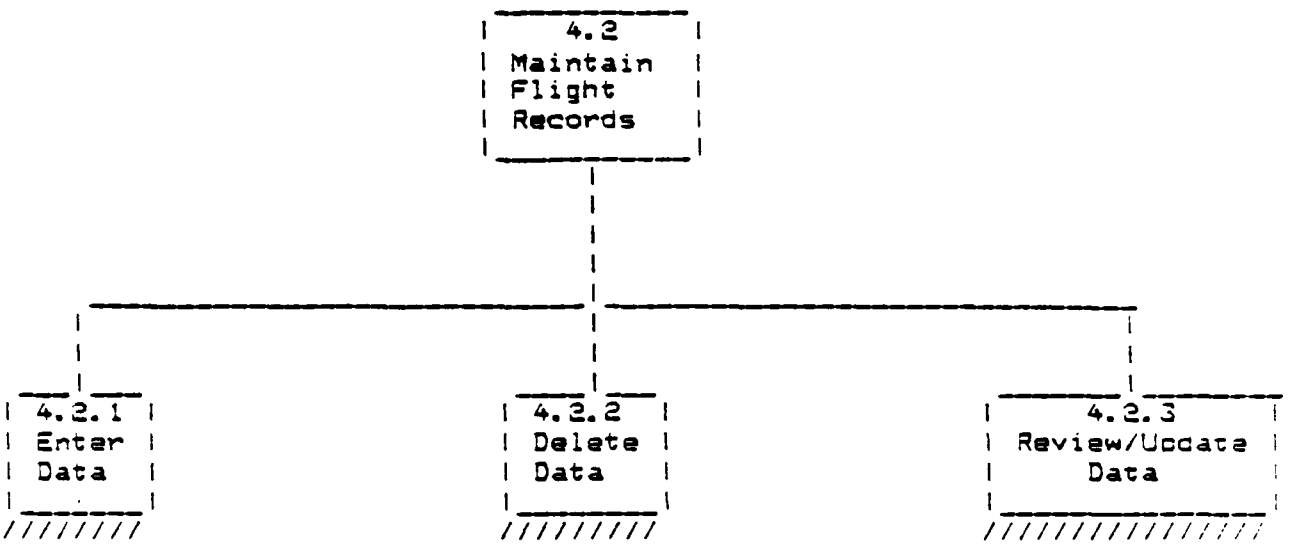


Figure 12

Maintain Flight Records

****

Name: Enter Data
Function Identifier: 4.2.1

Description: Allows user to enter data into pre-defined data fields.

****

Name: Delete Data
Function Identifier: 4.2.2

Description: Allows user to delete data from the flight databases. Record numbering adjusted accordingly.

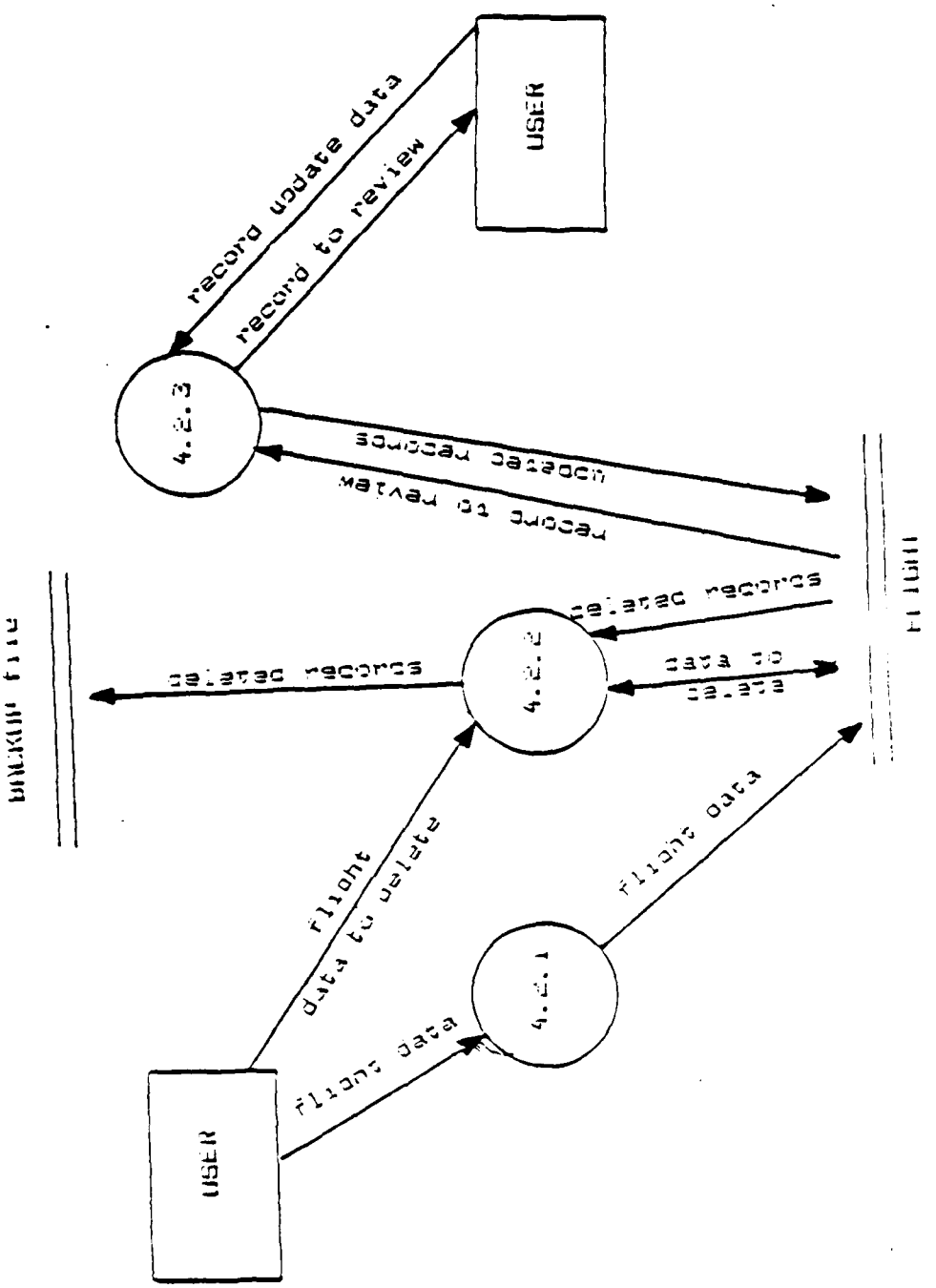


Figure 13
Maintain Flight Records Data Flow Diagram

****

Name: Review/update Data
Function Identifier: 4.2.3

Description: Allows the user to review elements in databases and make changes if necessary.

****
****

Name: Maintain Maintenance Records
Function Identifier: 4.3

Description: Allows user to enter the pre-structured maintenance databases to add, delete, or change data.

****

c. Maintain Maintenance Records Decomposition

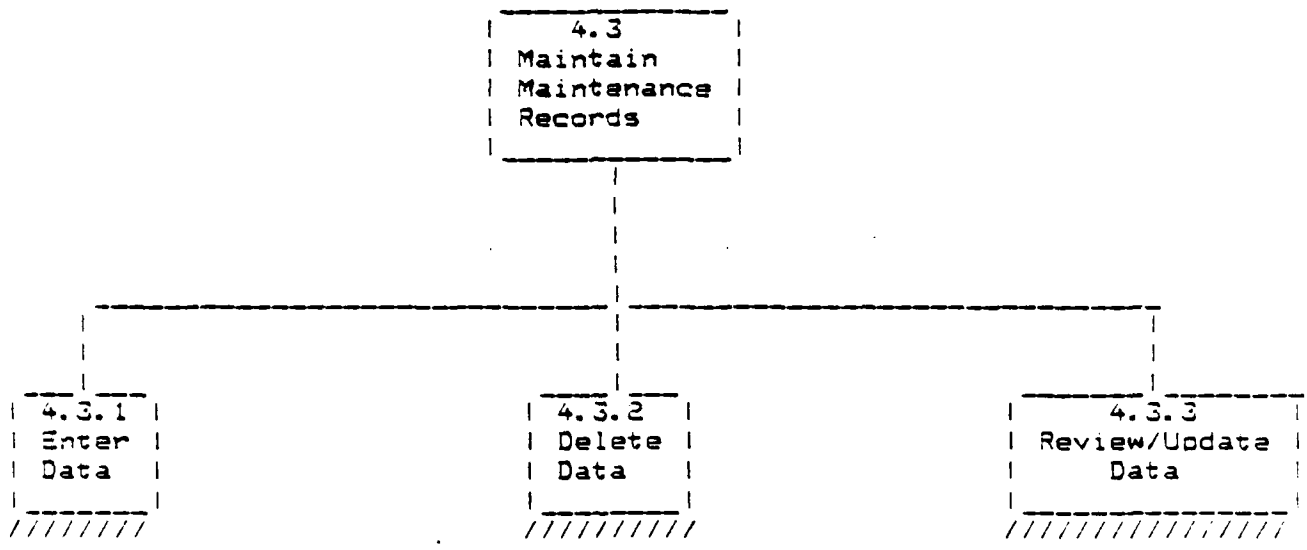


Figure 14

Maintain Maintenance Records

****

Name: Enter Data
Function Identifier: 4.3.1

Description: Allows user to enter data into pre-defined data fields.

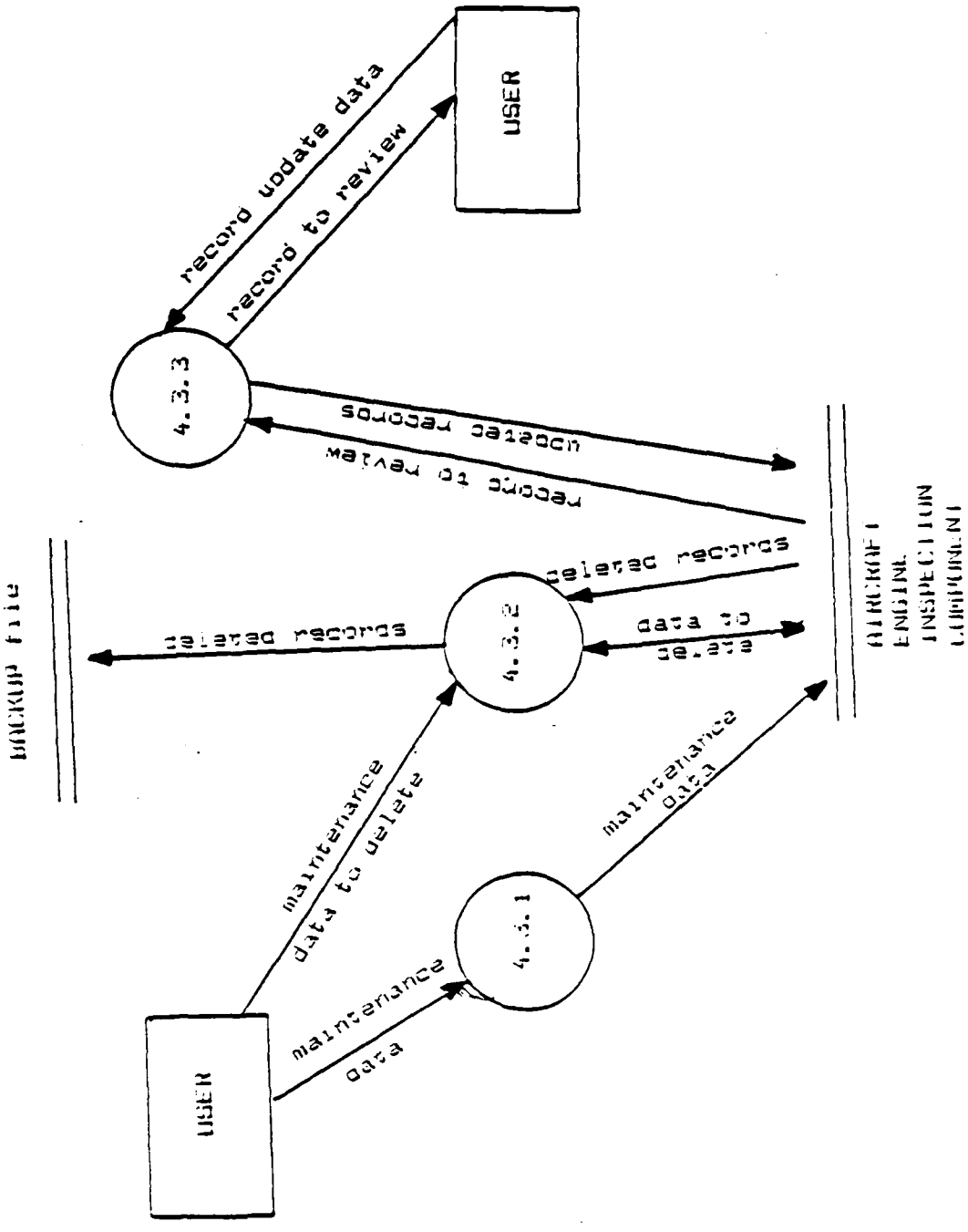


Figure 15
Maintain Maintenance Records Data Flow Diagram

****

Name: Delete Data
Function Identifier: 4.3.2

Description: Allows user to delete data from the maintenance databases. Record numbering adjusted accordingly.

****

Name: Review/update Data
Function Identifier: 4.3.3

Description: Allows the user to review elements in databases and make changes if necessary.

****

****

Name: Maintain Training Records
Function Identifier: 4.4

Description: Allows user to enter the pre-structured training databases to add, delete, or change data.

****

d. Maintain Training Records Decomposition

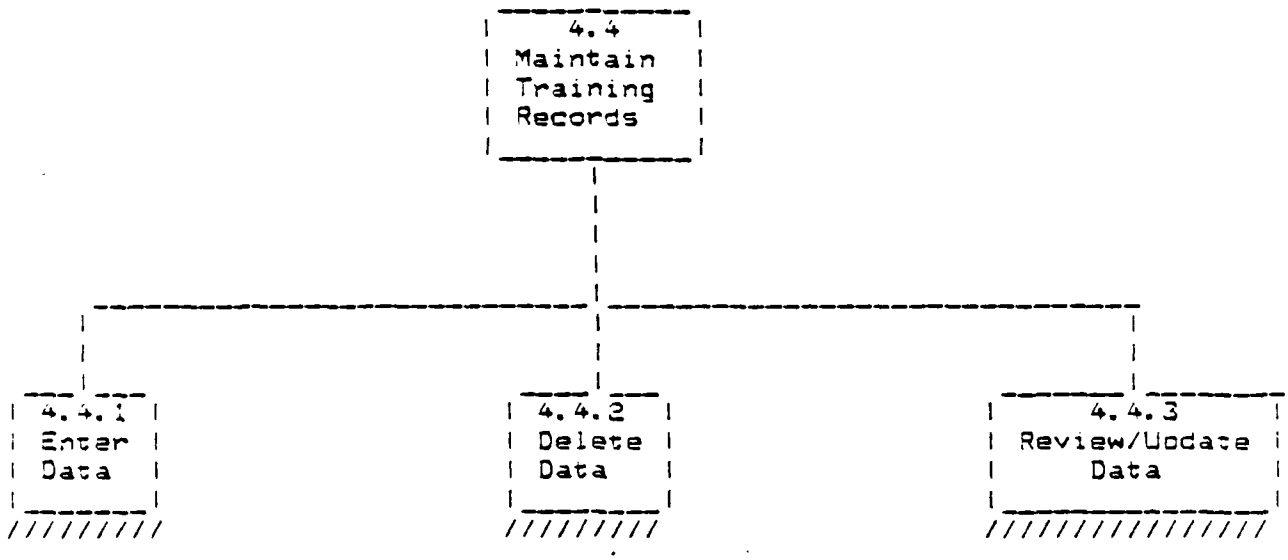


Figure 16

Maintain Training Records

****

Name: Enter Data
Function Identifier: 4.4.1

Description: Allows user to enter data into pre-defined data fields.

****

Name: Delete Data
Function Identifier: 4.4.2

Description: Allows user to delete data from the training databases. Record numbering adjusted accordingly.

****

Name: Review/update Data
Function Identifier: 4.4.3

Description: Allows the user to review elements in databases and make changes if necessary.

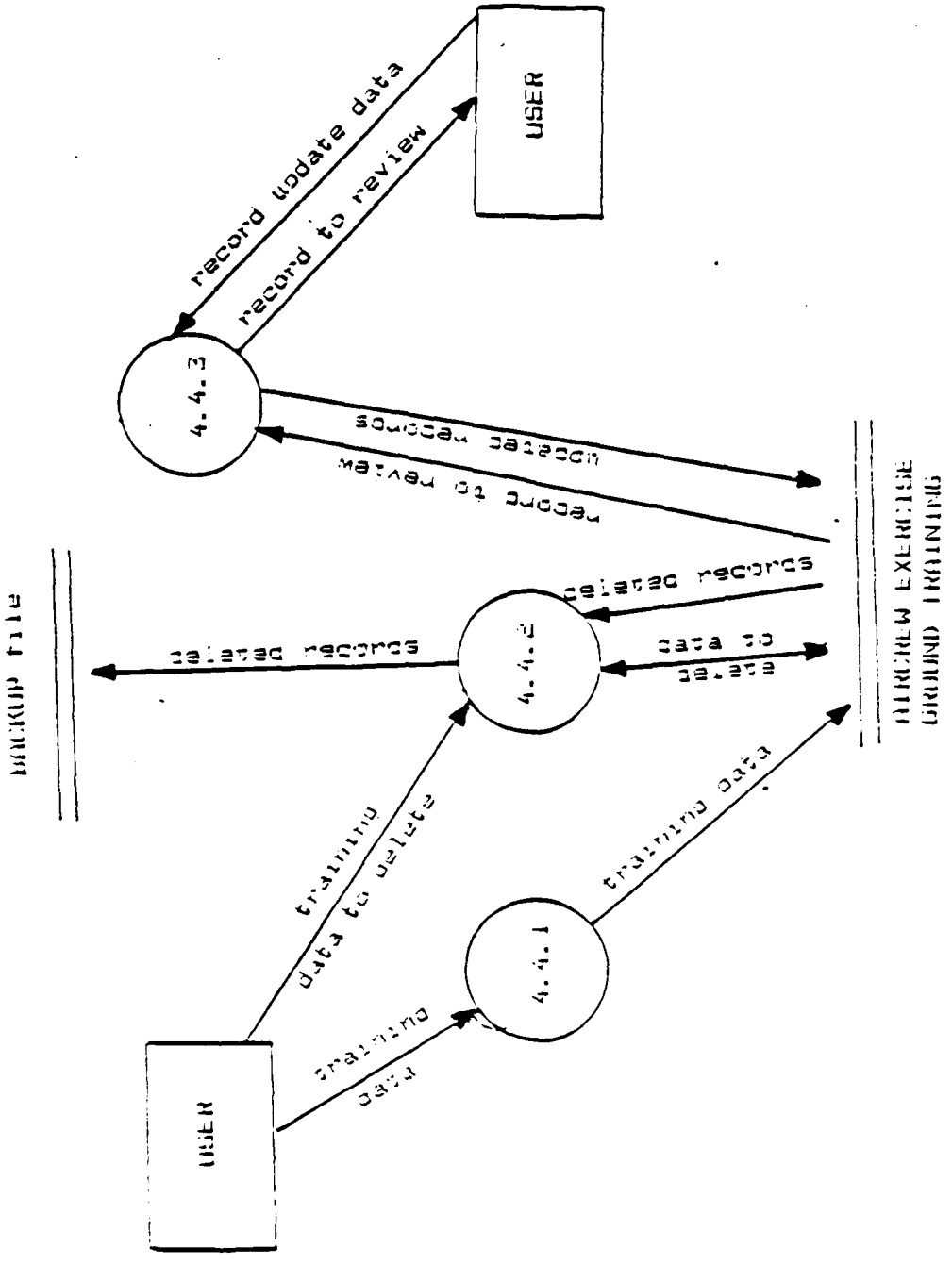


Figure 17
Maintain Training Records Data Flow Diagram

****
Name: Maintain Supply Records
Function Identifier: 4.5

Description: Allows user to enter the pre-structured supply databases to add, delete, or change data.
****

e. Maintain Supply Records Decomposition

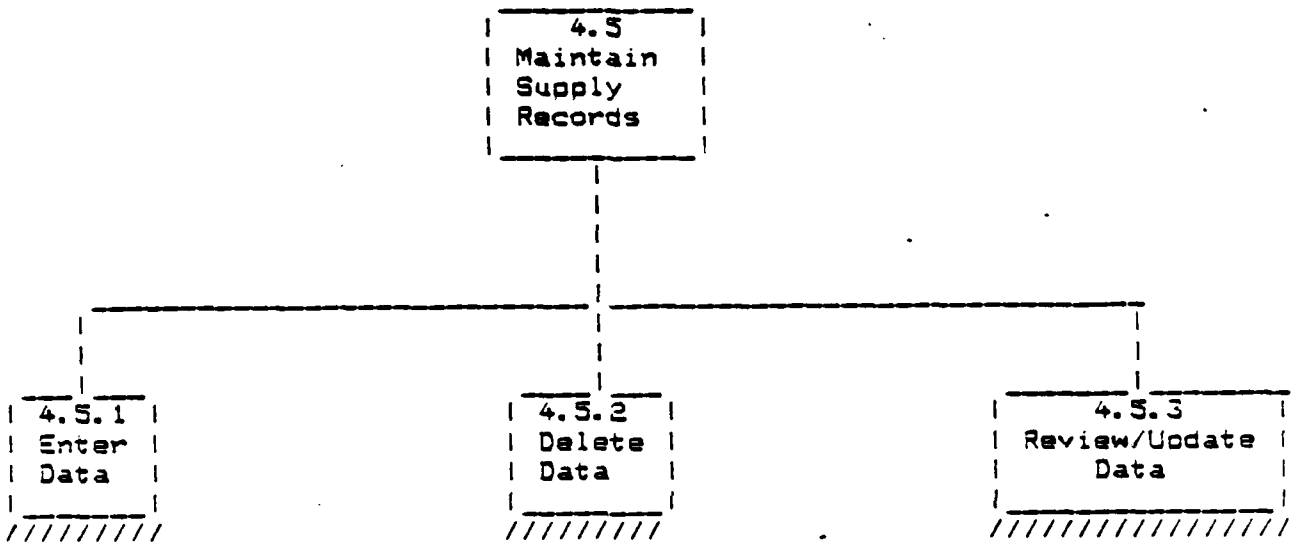


Figure 18

Maintain Supply Records

****
Name: Enter Data
Function Identifier: 4.5.1

Description: Allows user to enter data into pre-defined data fields.
****
Name: Delete Data
Function Identifier: 4.5.2

Description: Allows user to delete data from the supply databases. Record numbering adjusted accordingly.

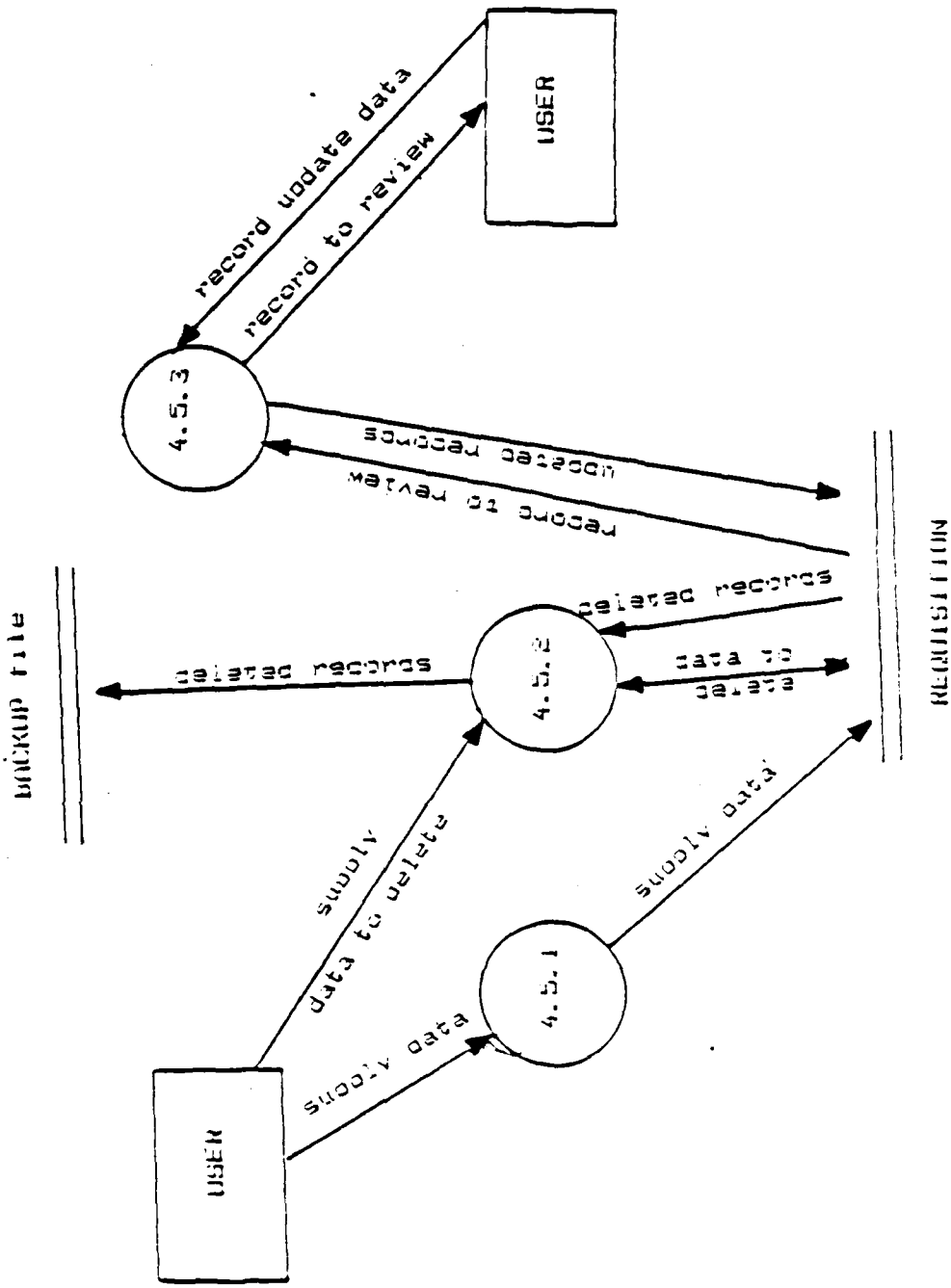


Figure 19
Maintain Supply Records Data Flow Diagram

****

Name: Review/update Data
Function Identifier: 4.5.3

Description: Allows the user to review elements in databases and make changes if necessary.

5. Produce Reports Functional Decomposition

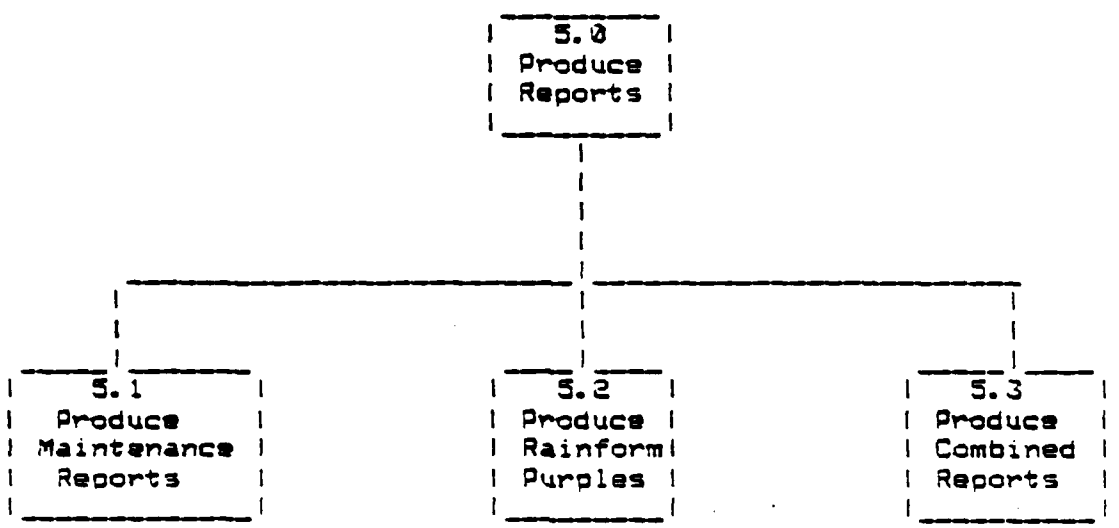


Figure 20

Produce Reports

****

Name: Produce Maintenance Reports
Function Identifier: 5.1

Description: Allows user to produce various maintenance reports.

****

a. Produce Maintenance Reports Decomposition

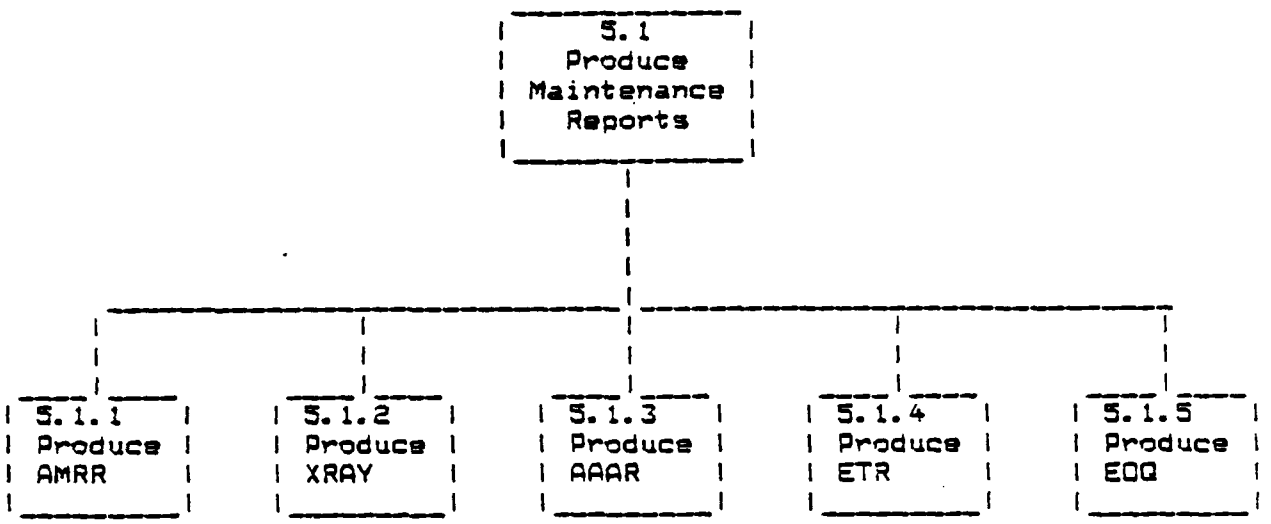


Figure 21

Produce Maintenance Reports

****

Name: Produce AMRR
Function Identifier: 5.1.1

Description: Produces the Aircraft Material Readiness Report by displaying the AMRR template, asking user for required information, computing totals of information fields, and outputting formatted and compiled report. Also makes a backup of previous totals used in compiling the new totals.

****

(1) Produce AMRR Decomposition.

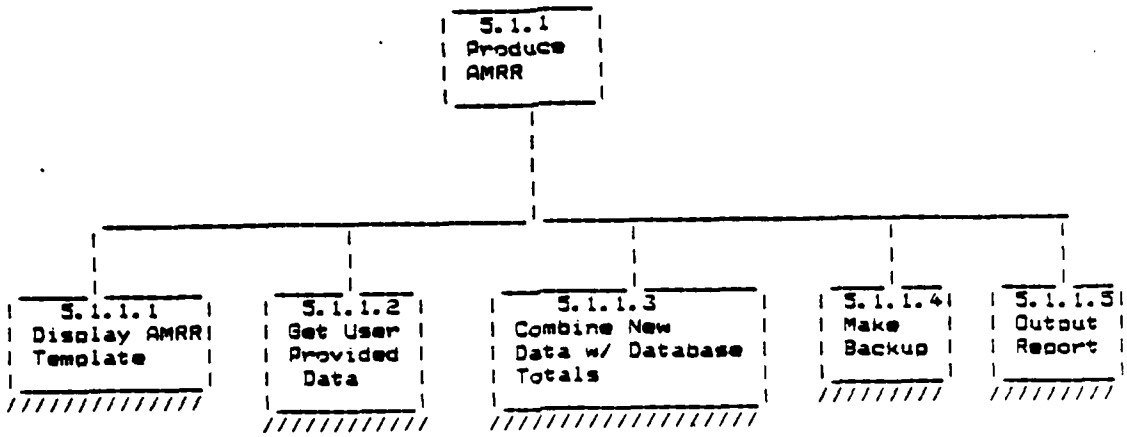


Figure 22

Produce AMRR

****

Name: Display AMRR Template
Function Identifier: 5.1.1.1

Description: Blank formatted version of AMRR is displayed on the screen.

****

Name: Get User Provided Data
Function Identifier: 5.1.1.2

Description: Prompts the user for input into data fields required for update. User provided data is described in App. B.

****

Name: Combine New Data w/ Database Totals
Function Identifier: 5.1.1.3

Description: Performs data compilation for the AMRR report. Combines historical data from the specified databases within the inclusive dates to provide totals in the report total blocks.

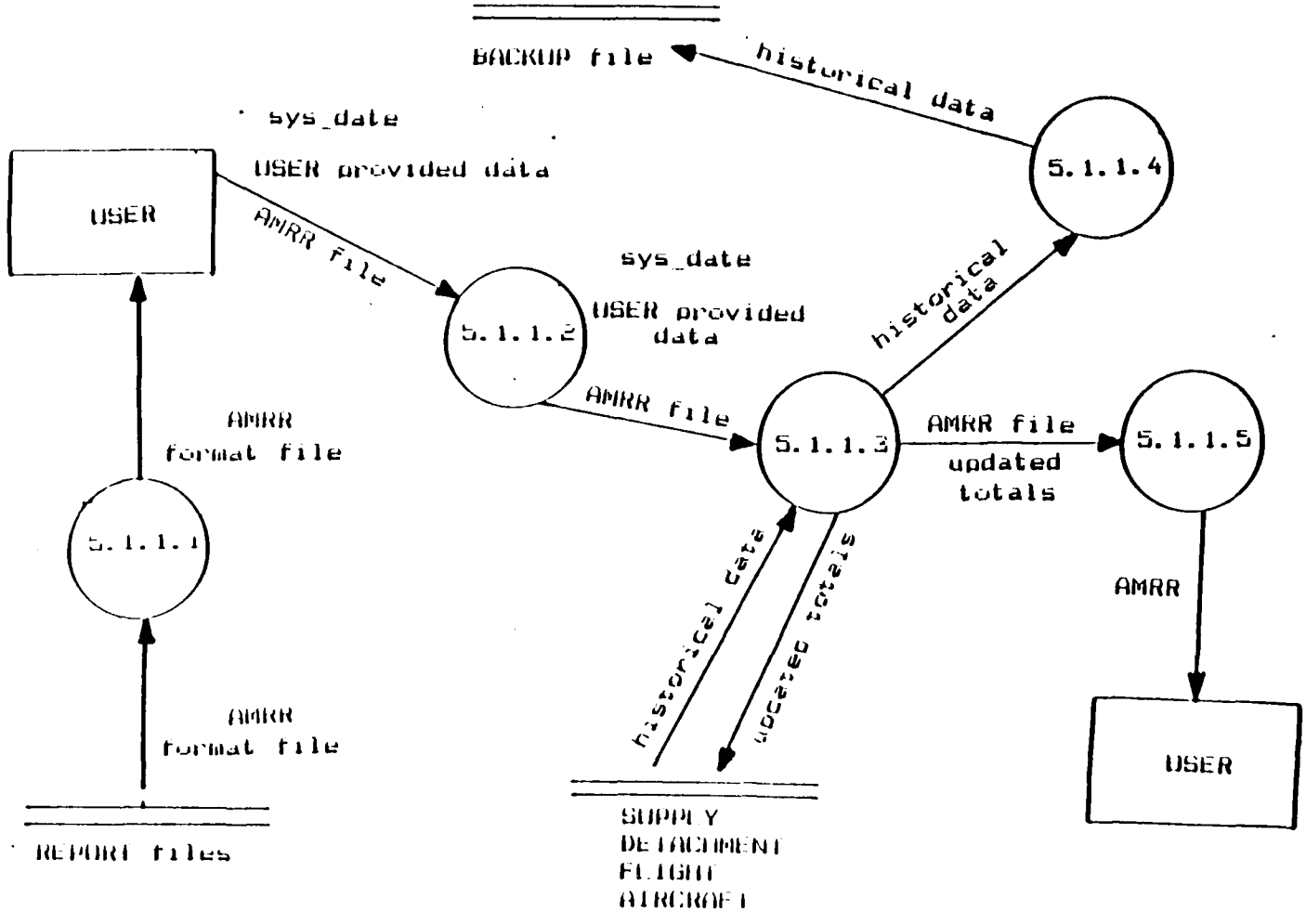


Figure 23
Produce AMRR Data Flow Diagram

****

Name: Make Backup
Function Identifier: 5.1.1.4

Description: Ensures backup of previous totals from the databases accessed in 5.1.1.3.

****

Name: Output Report
Function Identifier: 5.1.1.5

Description: Finished AMRR report is printed out.

****

****

Name: Produce XRAY
Function Identifier: 5.1.2

Description: Produces the Aircraft Custody/Status Change Report (XRAY) by displaying the XRAY template, asking user for required information, computing totals of information fields, and outputting formatted and compiled report. Also makes a backup of previous totals used in compiling the new totals.

****

(2) Produce XRAY Decomposition.

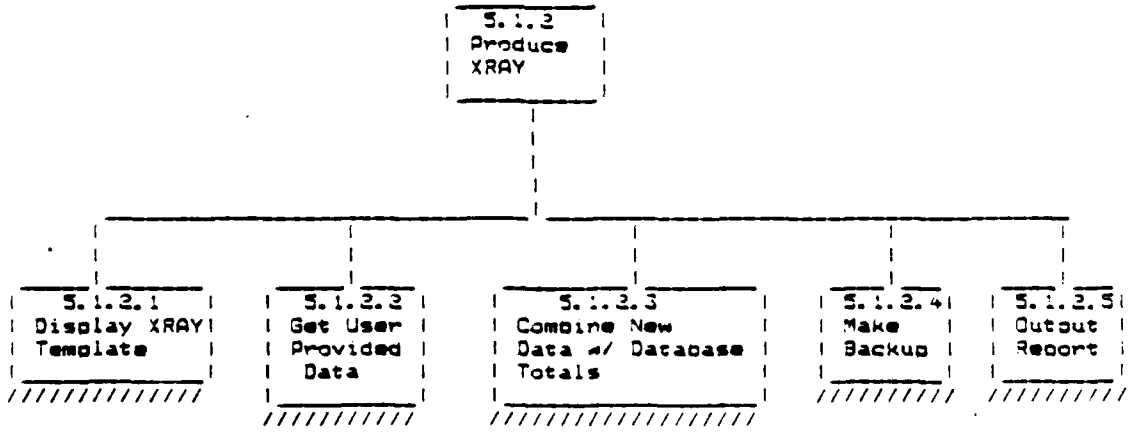


Figure 24

Produce XRAY

****

Name: Display XRAY Template
Function Identifier: 5.1.2.1

Description: Blank formatted version of XRAY is displayed on the screen.

****

Name: Get User Provided Data
Function Identifier: 5.1.2.2

Description: Prompts the user for input into data fields required for update. User provided data is described in App. B.

****

Name: Combine New Data w/ Database Totals
Function Identifier: 5.1.2.3

Description: Performs data compilation for the XRAY report. Combines historical data from the specified databases within the inclusive dates to provice totals in the report total blocks.

****

Name: Make Backup
Function Identifier: 5.1.2.4

Description: Ensures backup of previous totals from the databases accessed in 5.1.2.3.

****

Name: Output Report
Function Identifier: 5.1.2.5

Description: Finished XRAY report is printed out.

****

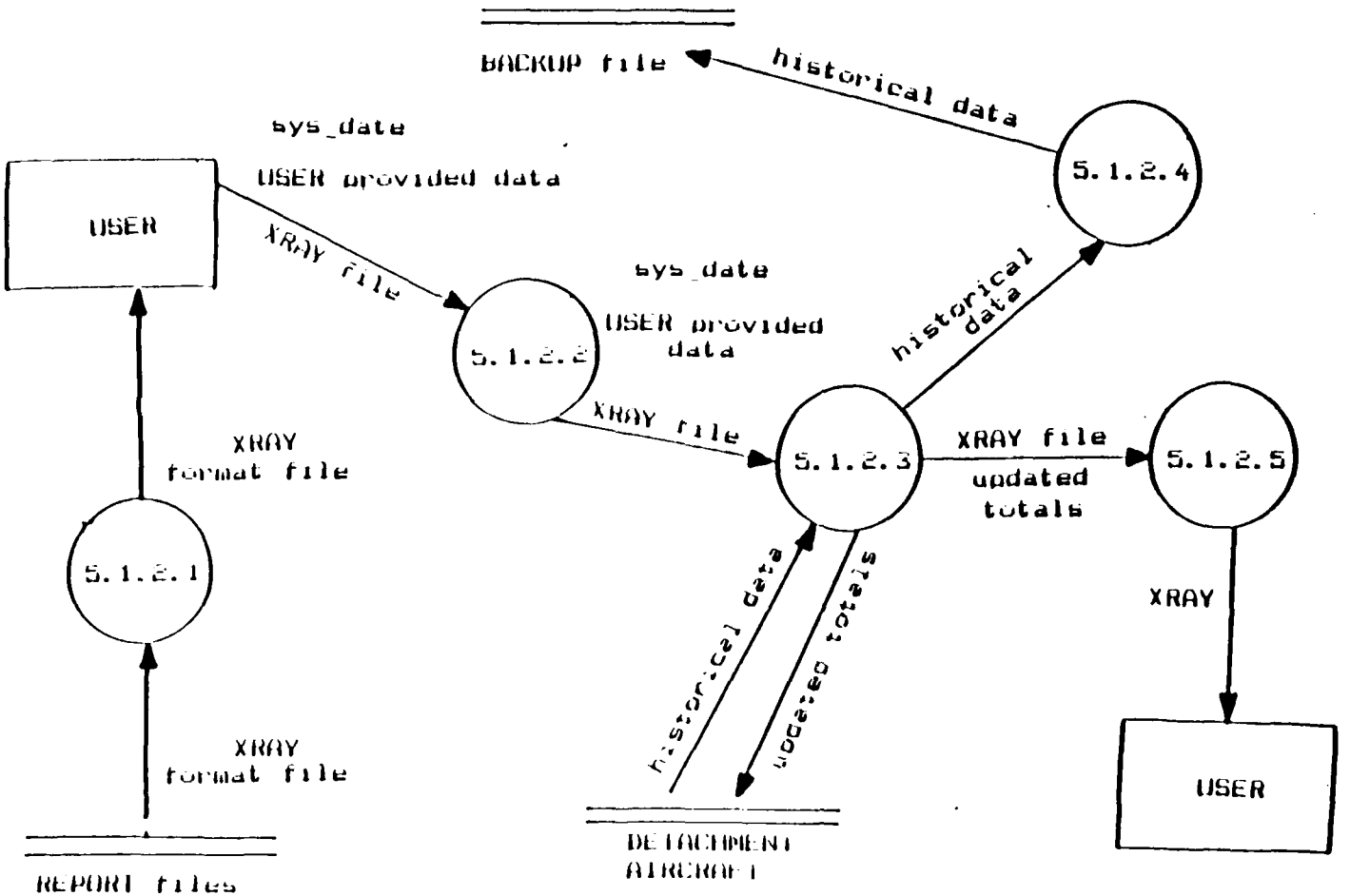


Figure 25
Produce XRAY Data Flow Diagram

****

Name: Produce AAAR
Function Identifier: 5.1.3

Description: Produces the Aircraft Accounting Audit Report (AAAR) by displaying the AAAR template, asking user for required information, computing totals of information fields, and outputting formatted and compiled report. Also makes a backup of previous totals used in compiling the new totals.

****

(3) Produce AAAR Decomposition.

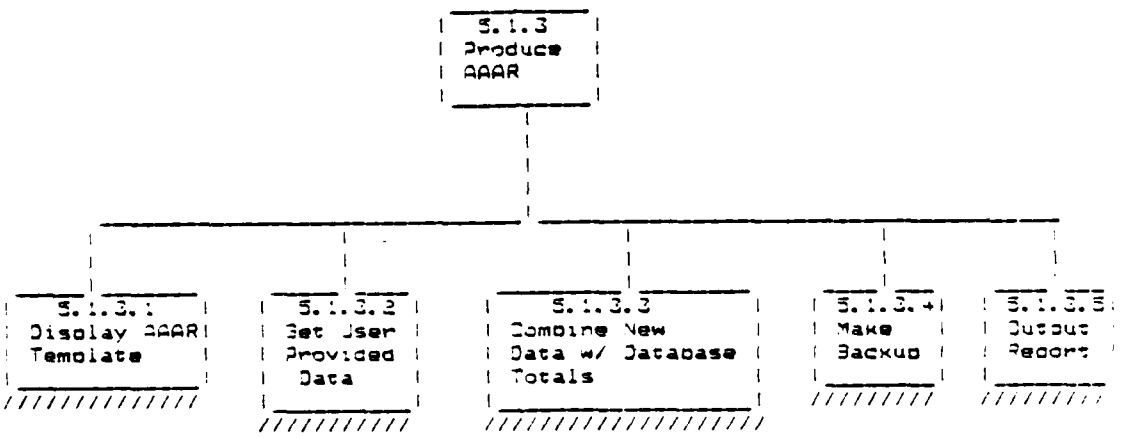


Figure 26

Produce AAAR

****

Name: Display AAAR Template
Function Identifier: 5.1.3.1

Description: Blank formatted version of AAAR is displayed on the screen.

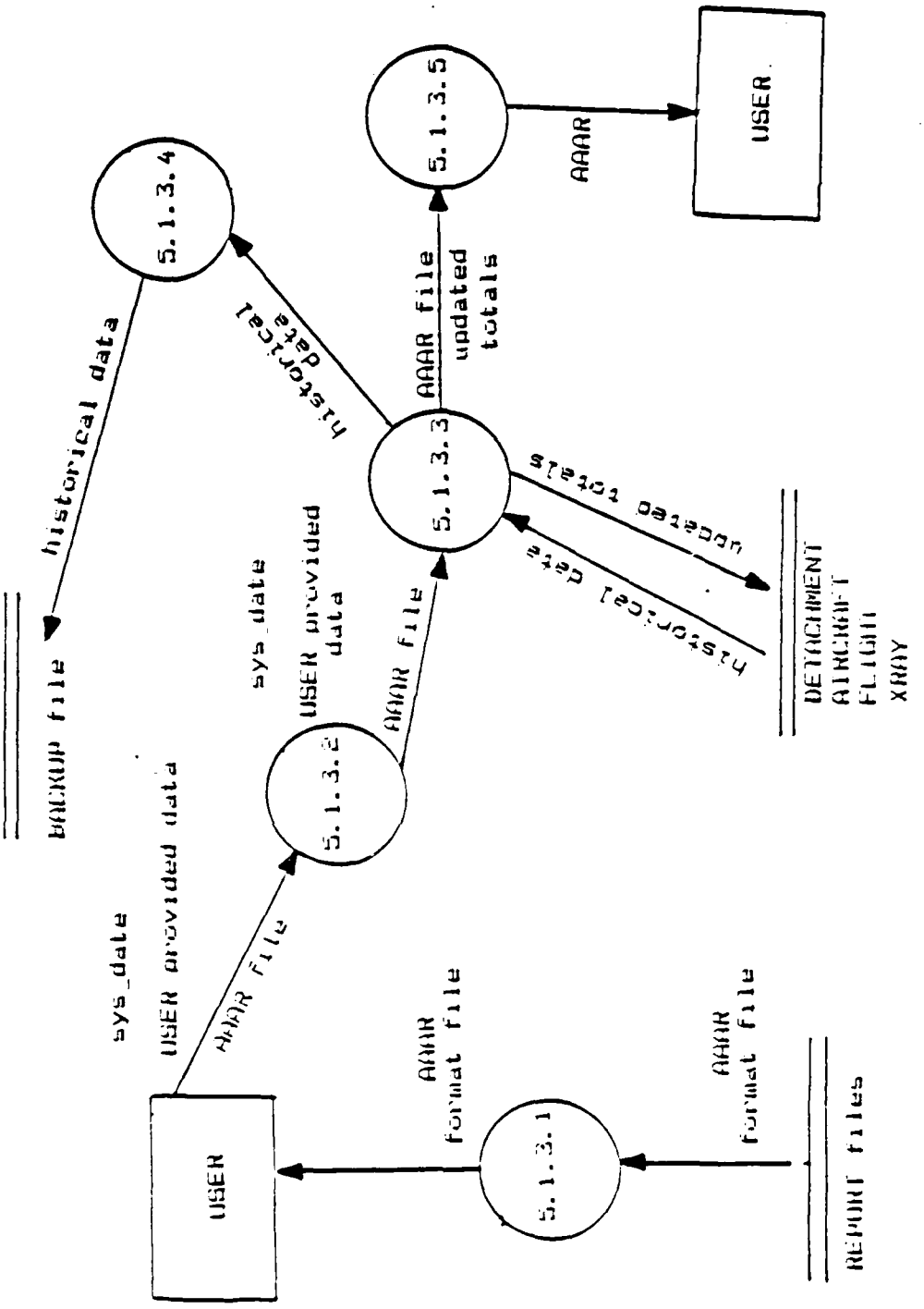


Figure 27
Produce AAAR Data Flow Diagram

****
Name: Get User Provided Data
Function Identifier: 5.1.3.2

Description: Prompts the user for input into data fields required for update. User provided data is described in App. B.

****
Name: Combine New Data w/ Database Totals
Function Identifier: 5.1.3.3

Description: Performs data compilation for the AAAR report. Combines historical data from the specified databases within the inclusive dates to provide totals in the report total blocks.

****
Name: Make Backup
Function Identifier: 5.1.3.4

Description: Ensures backup of previous totals from the databases accessed in 5.1.3.3.

****
Name: Output Report
Function Identifier: 5.1.3.5

Description: Finished AAAR report is printed out.

****

****
Name: Produce ETR
Function Identifier: 5.1.4

Description: Produces the Engine Transaction Report (ETR) by displaying the ETR template, asking user for required information, computing totals of information fields, and outputting formatted and compiled report. Also makes a backup of previous totals used in compiling the new totals.

(4) Produce ETR Decomposition.

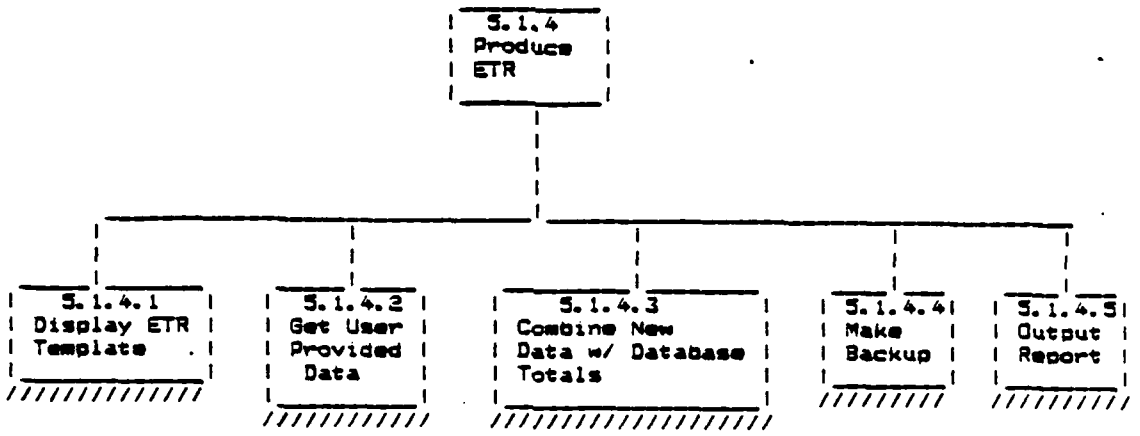


Figure 28

Produce ETR

****

Name: Display ETR Template
Function Identifier: 5.1.4.1

Description: Blank formatted version of ETR is displayed on the screen.

****

Name: Get User Provided Data
Function Identifier: 5.1.4.2

Description: Prompts the user for input into data fields required for update. User provided data is described in App. B.

****

Name: Combine New Data w/ Database Totals
Function Identifier: 5.1.4.3

Description: Performs data compilation for the ETR report. Combines historical data from the specified databases within the inclusive dates to provide totals in the report total blocks.

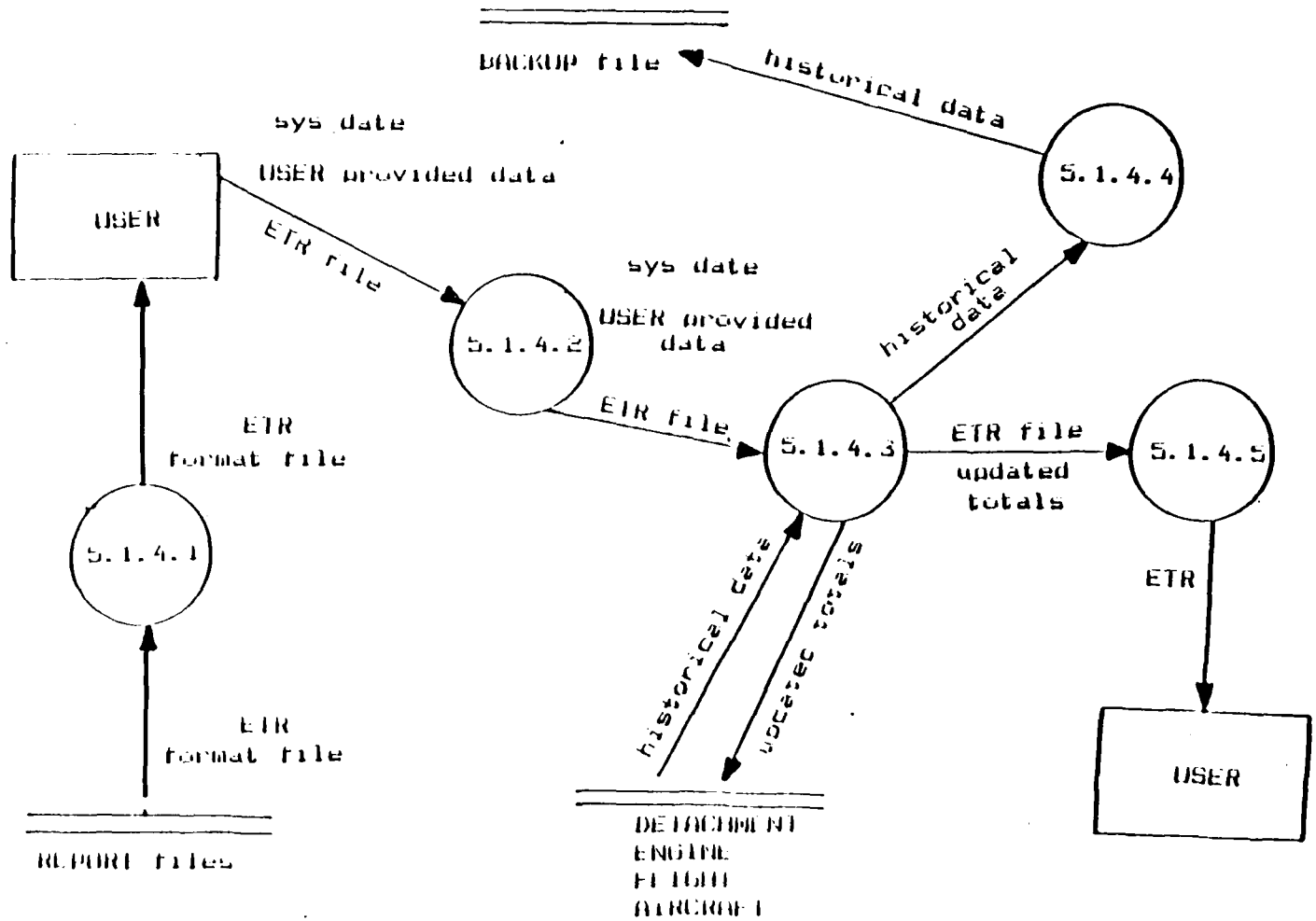


Figure 29
Produce ETR Data Flow Diagram

****
Name: Make Backup
Module Identifier: 5.1.4.4

Description: Ensures backup of previous totals from the databases accessed in 5.1.4.3.
****
Name: Output Report
Function Identifier: 5.1.4.5

Description: Finished ETR report is printed out.
****
****
Name: Produce EOQ
Function Identifier: 5.1.5

Description: Produces the End-of-Quarter (EOQ) Report by displaying the EOQ template, asking user for required information, computing totals of information fields, and outputting formatted and compiled report. Also makes a backup of previous totals used in compiling the new totals.

(5) Produce EOQ Decomposition.

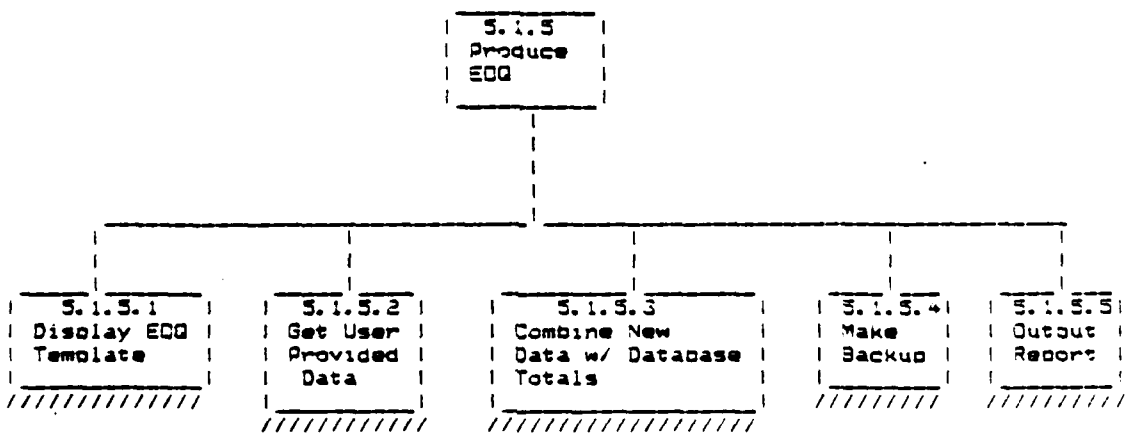


Figure 30

Produce EOQ

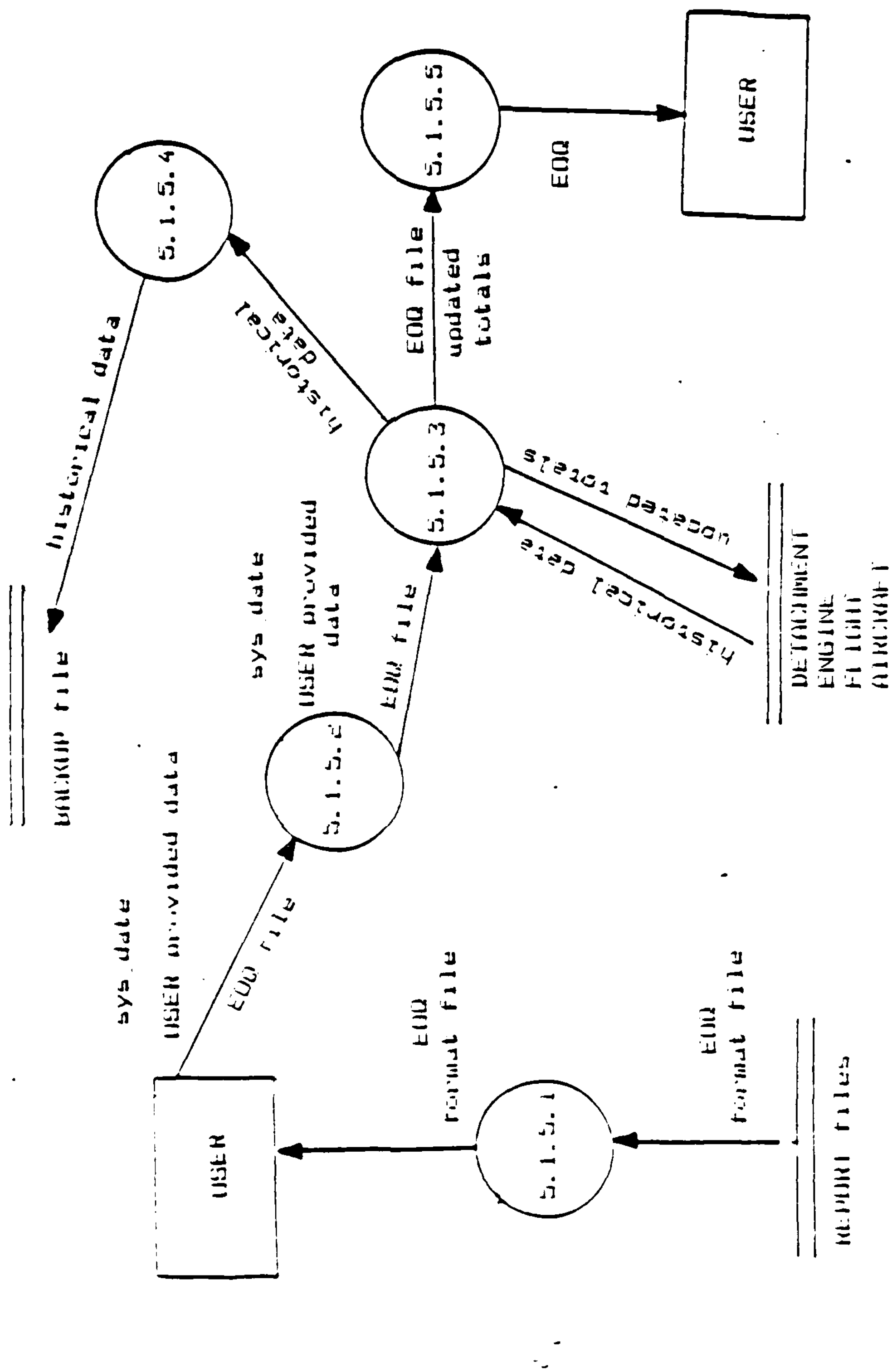


Figure 31
Produce EOQ Data Flow Diagram

****
Name: Display EOQ Template
Function Identifier: 5.1.5.1

Description: Blank formatted version of EOQ is displayed on the screen.
****
Name: Get User Provided Data
Function Identifier: 5.1.5.2

Description: Prompts the user for input into data fields required for update. User provided data is described in App. B.
****
Name: Combine New Data w/ Database Totals
Function Identifier: 5.1.5.3

Description: Performs data compilation for the EOQ report. Combines historical data from the specified databases within the inclusive dates to provide totals in the report total blocks.
****
Name: Make Backup
Function Identifier: 5.1.5.4

Description: Ensures backup of previous totals from the databases accessed in 5.1.5.3.
****
Name: Output Report
Function Identifier: 5.1.5.5

Description: Finished EOQ report is printed out.
****

The RAINFORM PURPLE is a special report submitted daily by LAMPS detachments. It does not contain data compiled from other historical data but may repeat information from day to day in the remarks and narrative section.

****
Name: Produce RAINFORM PURPLES
Function Identifier: 5.2

Description: Allows user to produce RAINFORM PURPLES, the LAMPS daily tactical flight summary, drawing from user provided information and the flight databases.

b. Produce RAINFORM PURPLES Decomposition

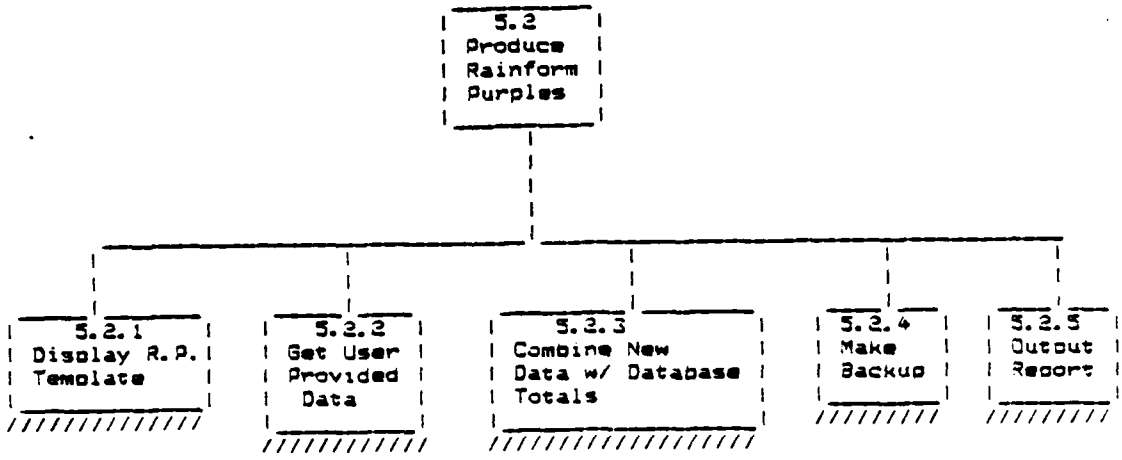


Figure 32

Produce RAINFORM PURPLES

****

Name: Display RAINFORM PURPLE Template
Function Identifier: 5.2.1

Description: Blank formatted version of RAINFORM PURPLE is displayed on the screen.

****

Name: Get User Provided Data
Function Identifier: 5.2.2

Description: Prompts the user for input into data fields required for update. Since this report is a daily flight summary, extensive update is necessary. Information provided in this report is compiled for use in flight data summaries elsewhere in the system.

****

Name: Combine New Data w/ Database Totals
Function Identifier: 5.2.3

Description: Performs flight data compilation for the RAINFORM PURPLE report. Combines historical data with newly input data.

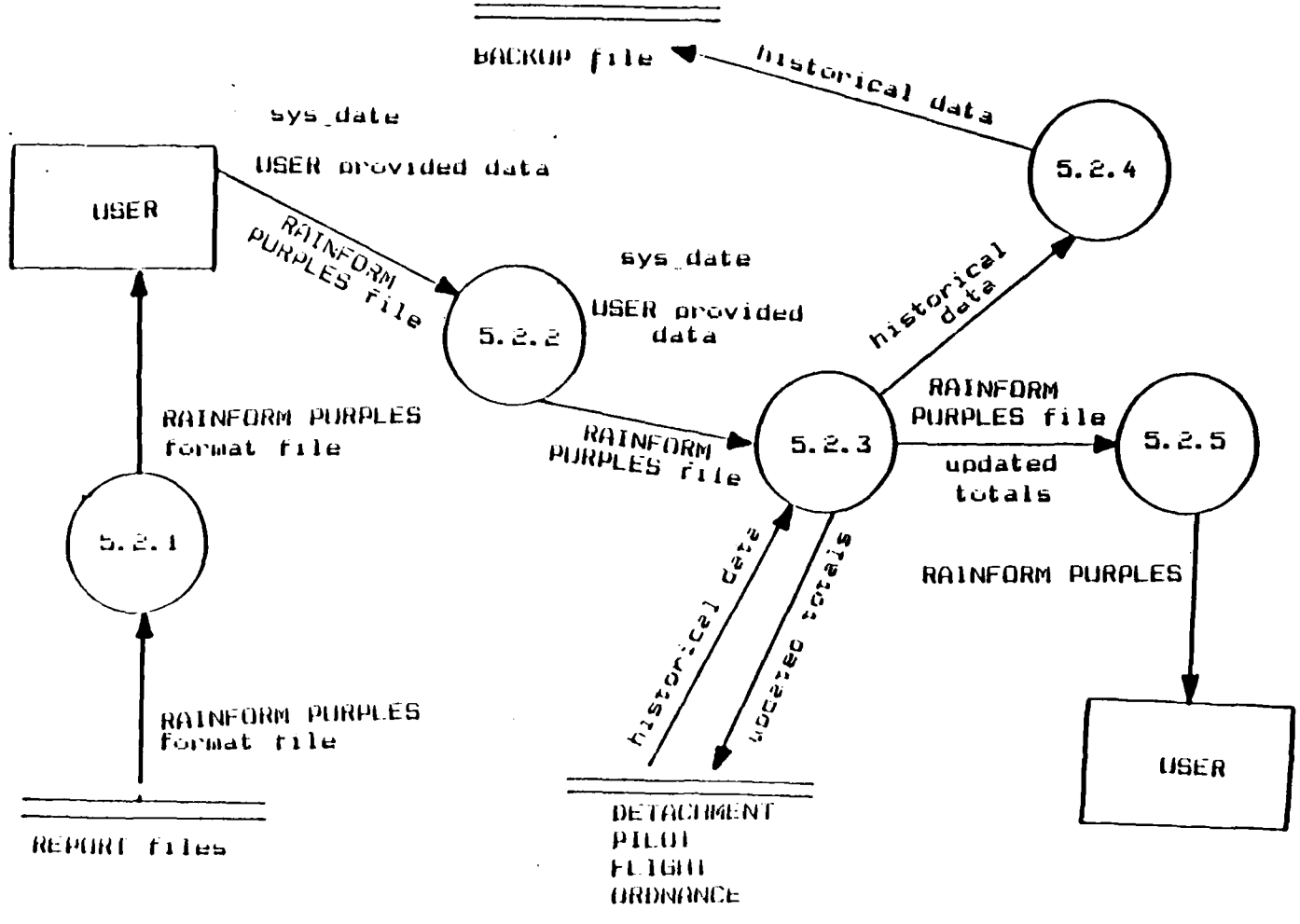


Figure 33
Produce Rainform Purple Data Flow Diagram

****

Name: Make Backup
Function Identifier: 5.2.4

Description: Ensures backup of previous report accessed in 5.2.3.

****

Name: Output Report
Function Identifier: 5.2.5

Description: Finished RAINFORM PURPLE is printed out.

****

****

Name: Produce Combined Reports
Function Identifier: 5.3

Description: Allows user to produce reports that combine data from several different sources which are not of a predominant nature, i.e. predominantly maintenance or flight.

****

c. Produce Combined Reports Decomposition

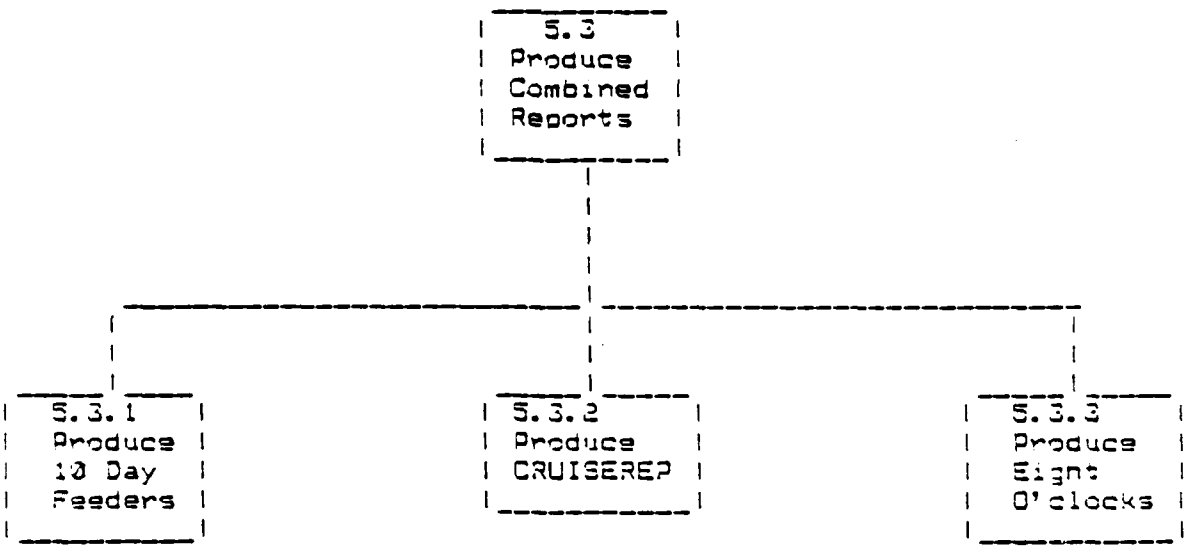


Figure 34

Produce Combined Reports

****

Name: Produce Ten Day Feeder Report
Function Identifier: 5.3.1

Description: Produces the Ten Day Feeder Report by displaying the Ten Day Feeder template, asking user for required information, computing totals of information fields, and outputting formatted and compiled report. Also makes a backup of previous totals used in compiling the new totals.

****

(1) Produce Ten Day Feeder Reports Decomposition.

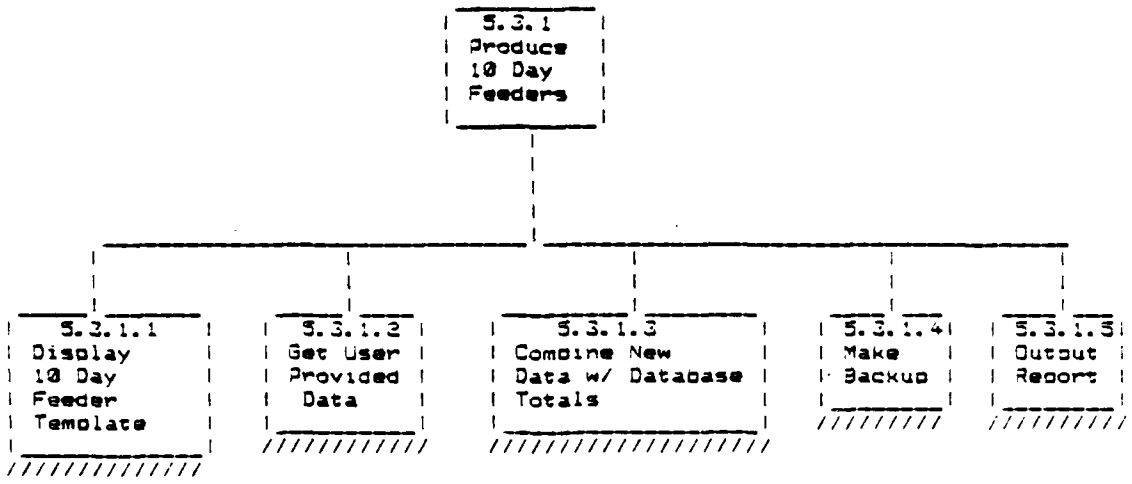


Figure 35

Produce Ten Day Feeders

****

Name: Display TEN DAY FEEDER Template
Function Identifier: 5.3.1.1

Description: Blank formatted version of TEN DAY FEEDER report is displayed on the screen.

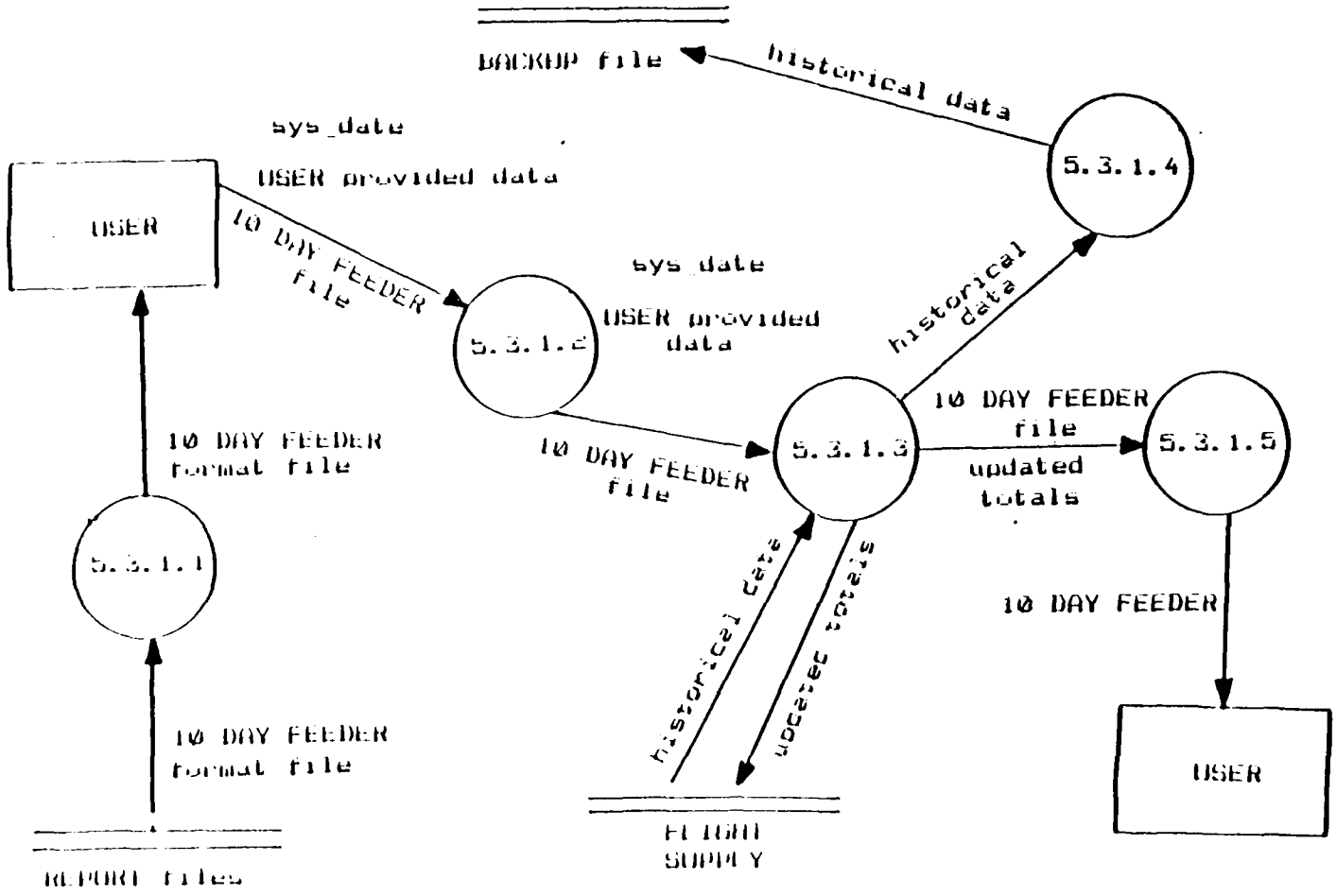


Figure 36 Produce 10-Day Feeder Data Flow Diagram

****
Name: Get User Provided Data
Function Identifier: 5.3.1.2

Description: Prompts the user for input into data fields required for update. User provided data is described in App. B.

****
Name: Combine New Data w/ Database Totals
Function Identifier: 5.3.1.3

Description: Performs data compilation for the TEN DAY FEEDER report. Combines historical data from the specified databases within the inclusive dates to provide totals in the report total blocks.

****
Name: Make Backup
Function Identifier: 5.3.1.4

Description: Ensures backup of previous totals from the databases accessed in 5.3.1.3.

****
Name: Output Report
Function Identifier: 5.3.1.5

Description: Finished TEN DAY FEEDER report is printed out.

****

****
Name: Produce CRUISEREP
Function Identifier: 5.3.2

Description: Produces the CRUISEREP by displaying the CRUISEREP template, asking user for required information, computing totals of information fields, and outputting formatted and compiled report. Also makes a backup of previous totals used in compiling the new totals.

****

(2) Produce CRUISEREP Decomposition.

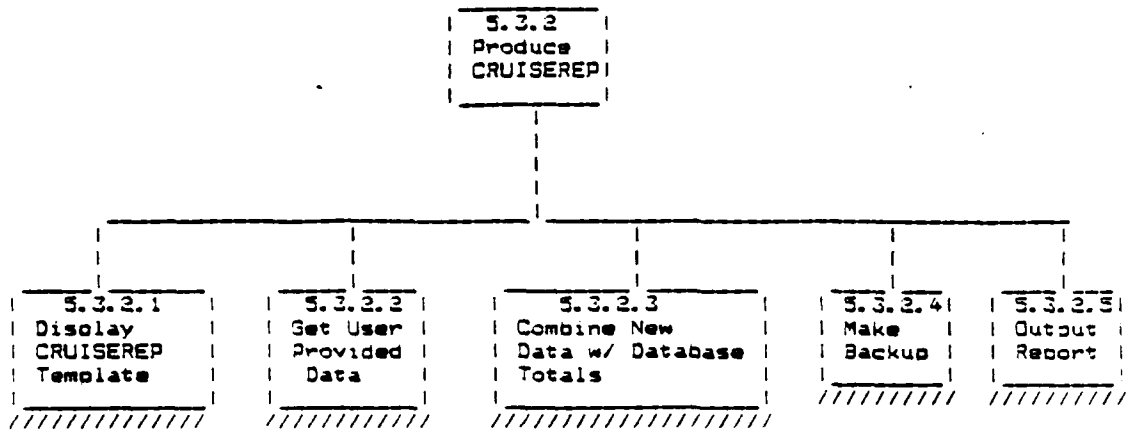


Figure 37

Produce CRUISEREP

****

Name: Display CRUISEREP Template
Function Identifier: 5.3.2.1

Description: Blank formatted version of CRUISEREP is displayed on the screen.

****

Name: Get User Provided Data
Function Identifier: 5.3.2.2

Description: Prompts the user for input into data fields required for update. User provided data is described in App. B.

****

Name: Combine New Data w/ Database Totals
Function Identifier: 5.3.2.3

Description: Performs data compilation for the CRUISEREP. Combines historical data from the specified databases within the inclusive dates to provide totals in the report total blocks.

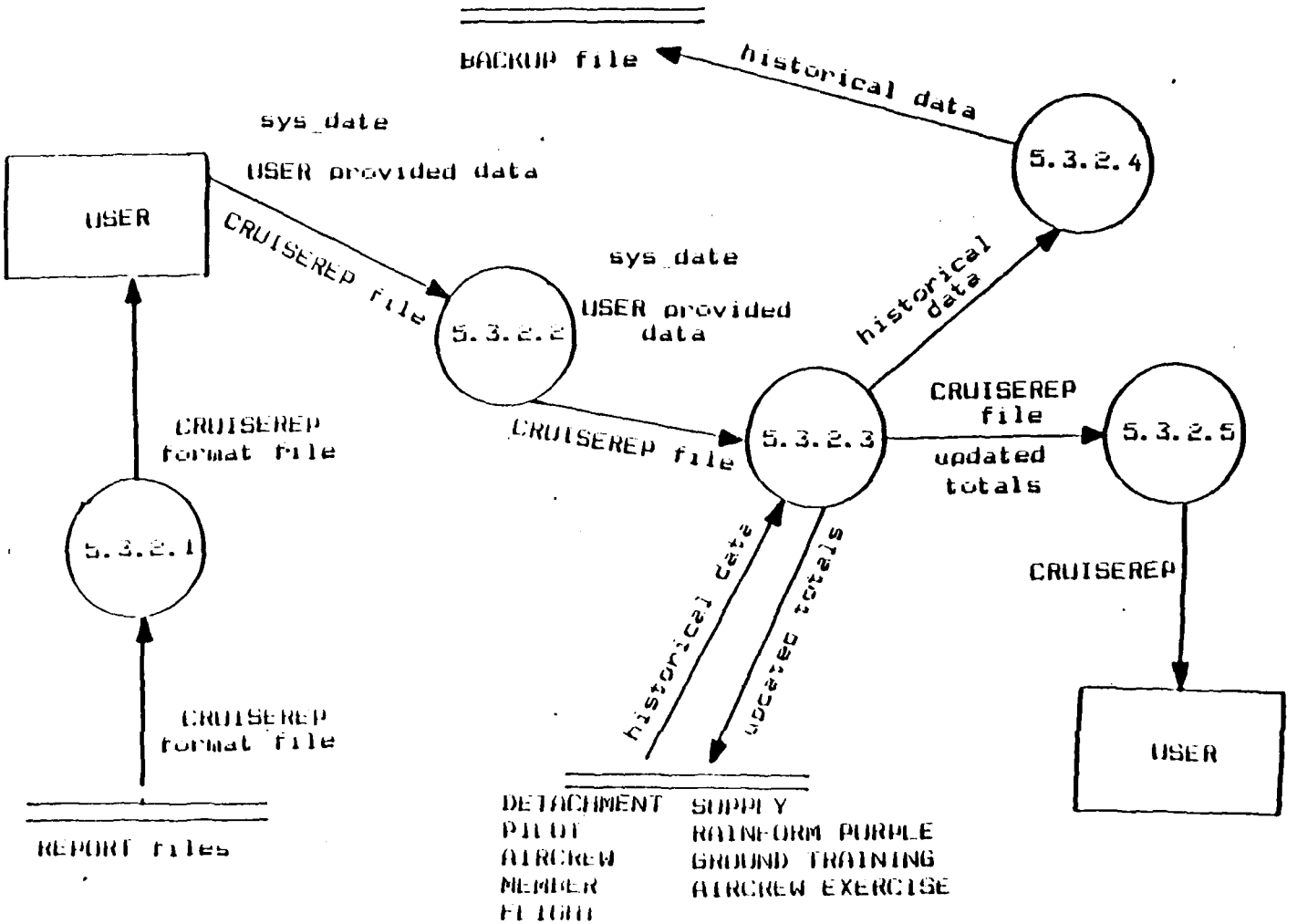


Figure 38
Produce CRUISEREP Data Flow Diagram

****
Name: Make Backup
Function Identifier: 5.3.2.4

Description: Ensures backup of previous totals from the databases accessed in 5.3.2.3.
****
Name: Output Report
Function Identifier: 5.3.2.5

Description: Finished CRUISEREP is printed out.
****

****
Name: Produce Eight O'clocks
Function Identifier: 5.3.3

Description: Produces Eight O'clock Reports by displaying the Eight O'clock Report template, asking user for required information, computing totals of information fields, and outputting formatted and compiled report. Also makes a backup of previous totals used in compiling the new totals.
****

(3) Produce Eight O'clocks Decomposition.

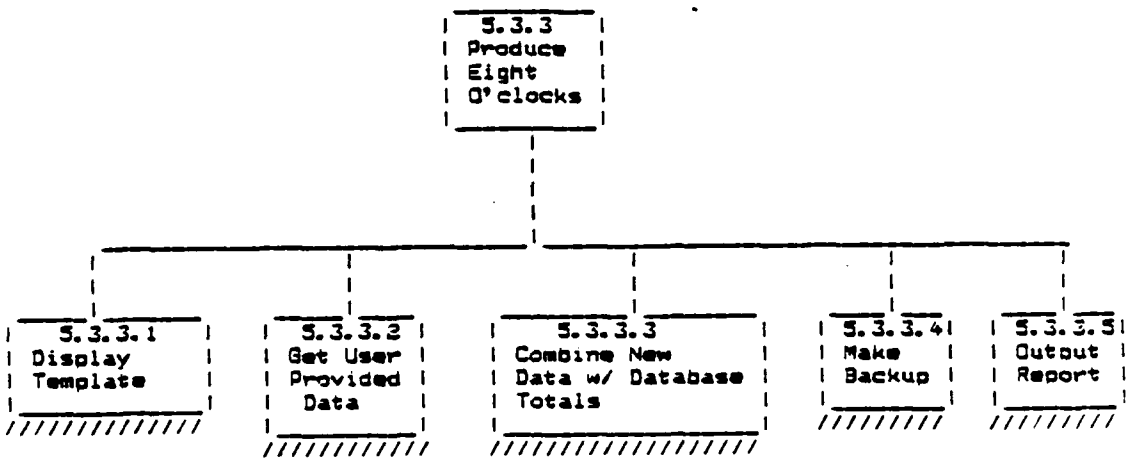


Figure 39

Produce Eight O'clocks

****

Name: Display Template
Function Identifier: 5.3.3.1

Description: Blank formatted version of EIGHT O'CLOCK REPORT is displayed on the screen.

****

Name: Get User Provided Data
Function Identifier: 5.3.3.2

Description: Prompts the user for input into data fields required for update. User provided data is described in App. B.

****

Name: Combine New Data w/ Database Totals
Function Identifier: 5.3.3.3

Description: Performs data compilation for the EIGHT O'CLOCK REPORT. Combines historical data from the specified databases within the inclusive dates to provide totals in the report total blocks.

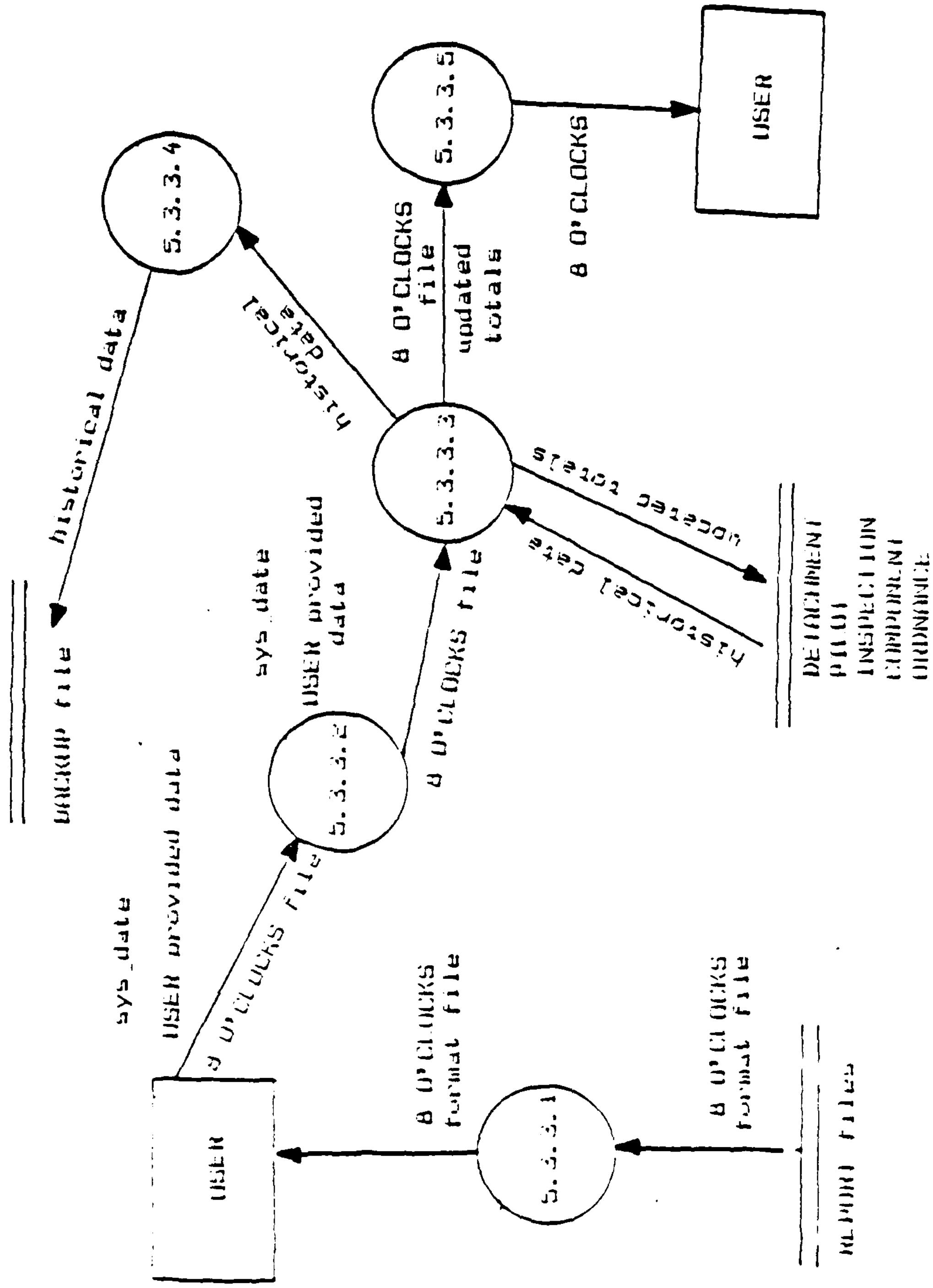


Figure 40
Produce Eight O'clock Reports Data Flow Diagram

****
Name: Make Backup
Function Identifier: 5.3.3.4

Description: Ensures backup of previous totals from the databases accessed in 5.3.3.3.
****
Name: Output Report
Function Identifier: 5.3.3.5

Description: Finished EIGHT O'CLOCK REPORT is printed out.
****

6. Review/Update Reports Functional Decomposition

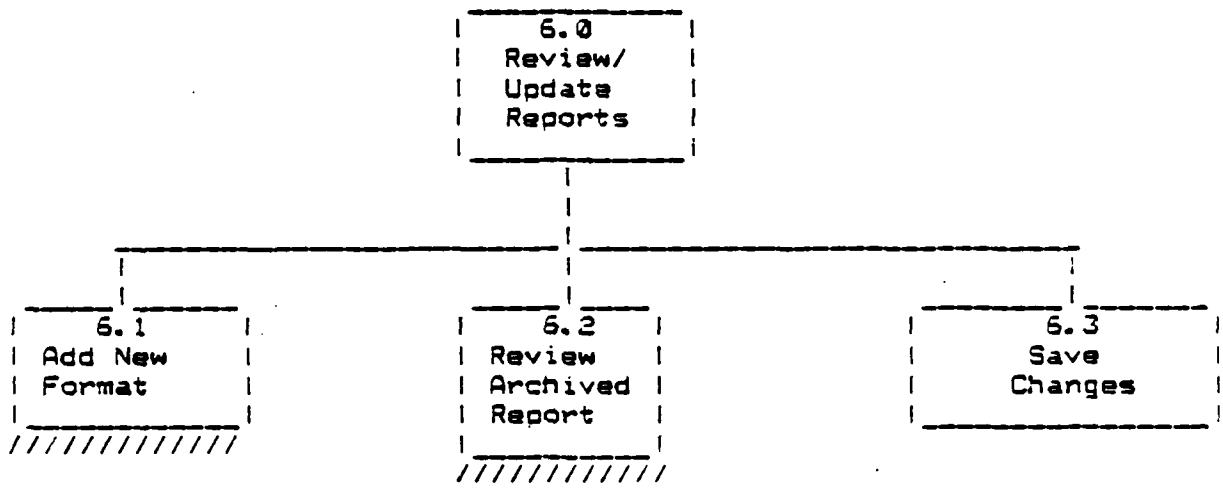


Figure 41

Review/Update Reports

****
Name: Add New Format
Function Identifier: 6.1
Description: Allows the user to define a new report format as reporting requirements change frequently. New report may draw from previously established databases and/or from user-created databases in function 3.0

****

Name: Review Archived Report
Function Identifier: 6.2

Description: Allows user to review previously stored reports for information, or to change erroneous data.

****

Name: Save Changes
Function Identifier: 6.3

Description: Allows user to make changes to old report, saves updates, and makes backup of old report.

****

a. Save Changes Decomposition

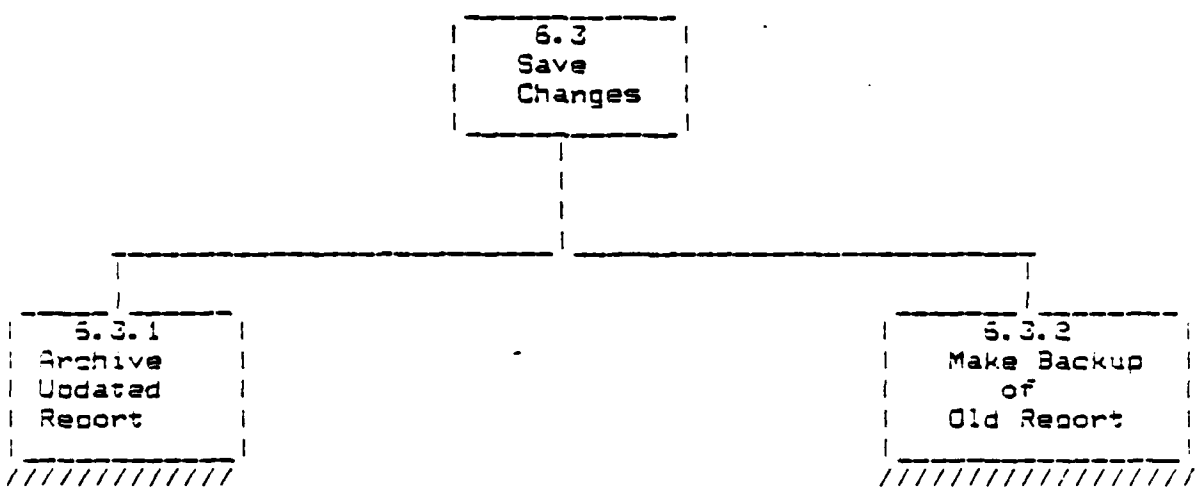


Figure 42

Save Changes

****

Name: Archive Updated Report
Function Identifier: 6.3.1

Description: Saves updated report.

****

Name: Make Backup of Old Report
Function Identifier: 6.3.2

Description: Makes backup copy of report before changes have been entered, as a precaution.

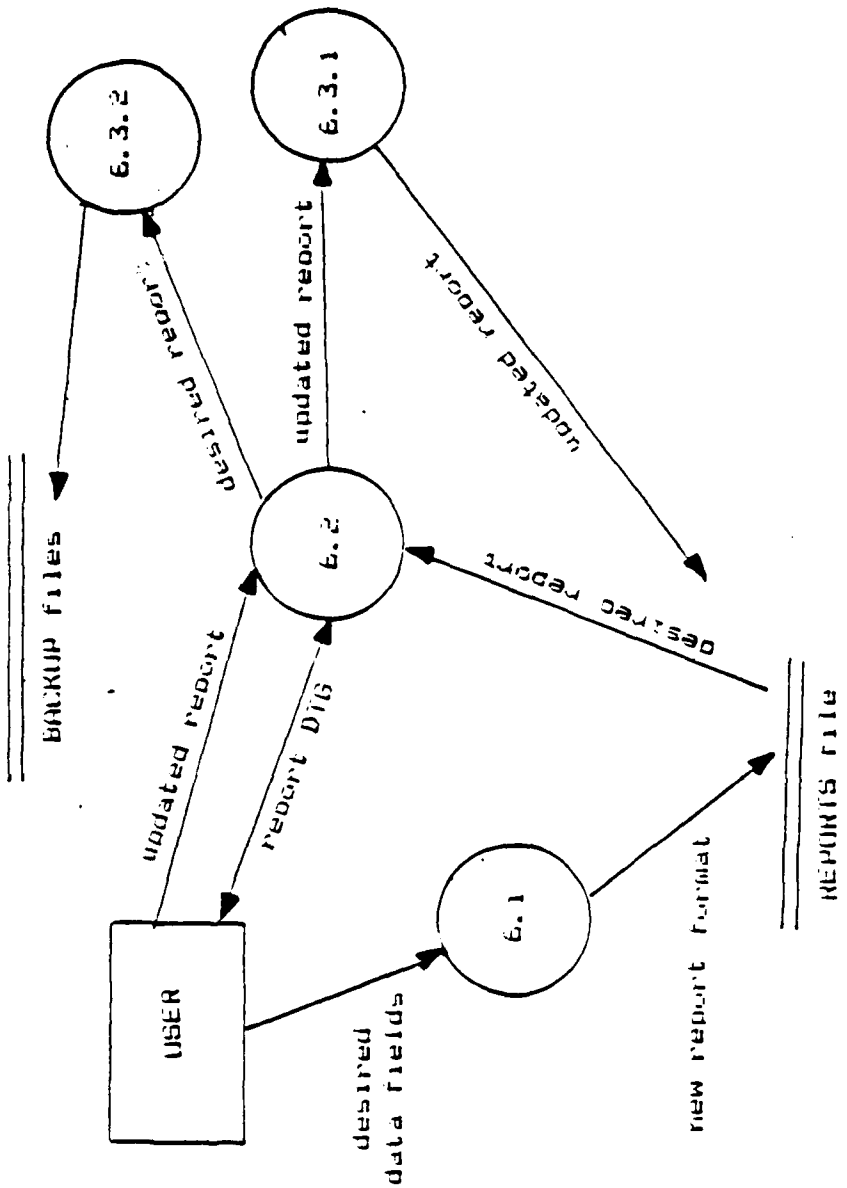


Figure 43
Review/Update Reports Data Flow Diagram

IV. INFORMATION DESCRIPTION

A. GENERAL

This chapter provides the description of the information to be used by the reports generation system as a data dictionary. The format for the data dictionary will be that recommended by NARDAC San Fransisco in its "Requirements Analysis Questionnaire Outline." [Ref. 16]

B. DATA DICTIONARY

This section defines the data to be used by the system. The purpose of this data dictionary is to form a central repository of data which may be referenced on any data element contained in the system. The dictionary consists of entities and attributes. An entity is a conceptual representation of an object. An attribute is a representation of a property of an entity. Each entity will be described followed by a list of attributes relating to that entity. Each attribute will then be defined.

1. Personnel Entities

a. Detachment Entity

****

Entity name	:	Detachment
Description	:	A division of a LAMPS squadron charged with the responsibility of performing the LAMPS mission. Detachments are individually deployed to various ships and are comprised of three to four

pilots, a single aircraft with support equipment, and the maintenance personnel to perform upkeep of the aircraft. Detachments are self-contained units with individual reporting responsibility.

Aliases : Unit, Department

Attributes : Detachment Parent Squadron Name (DET_SQD_NAME)
Detachment Number (DET_NUM)
Detachment Name = DET_SQD_NAME + DET_NUM (DET_NAME)
Detachment Unit Identification Code (DET_UIC)
Detachment Permanent Unit Code (DET_PUC)
Detachment 3M Organization Code (DET_ORG_CODE)
Ship Assigned Name (DET_SHIP_NAME)
Ship Assigned Unit Identification Code (DET_SHIP_UIC)
Detachment Readiness Status (DET_RED_STAT)

(1) Detachment Attributes.

****

Element name : DET_SQD_NAME
Format : Alphanumeric
No. Characters : 6

Description : The abbreviated name of the parent squadron.
Range of Values : NA
Example : HSL-32

****

Element name : DET_NUM
Format : Alphanumeric
No. Characters : 5

Description : The detachment number designated by the parent squadron.

Range of Values : "DET" + Numeric: 0-15
Example : Det 1

****

Element name : DET_UIC
Format : Numeric

No. Characters : 5
Description : The unique five-digit identifier assigned to all Naval units.

Range of Values : 00001-99999
Example : 21405

****

Element name : DET_PUC
Format : Numeric
No. Characters : 6

Description : The unique six-digit identifier assigned to LAMPS detachments.

Range of Values : 000001-999999
Example : 034165

****

Element name : DET_ORG_CODE
Format : Alphanumeric
No. Characters : 3

Description : The detachment unique code for entry into the 3M maintenance system.

Range of Values : NA
Example : 1B0

****

Element name : DET_SHIP_NAME
Format : Alphanumeric
No. Characters : 25

Description : The name of the ship the detachment is currently assigned to.

Range of Values : NA
Example : USS Arthur W. Radford

****

Element name : DET_SHIP_UIC
Format : Numeric
No. Characters : 5

Description : The unique five-digit identifier assigned to all Naval Units. The identifier of the ship to which the detachment is assigned.

Range of Values : 00001-99999
Example : 21405

****

Element name : DET_RED_STAT
Format : Alphanumeric

No. Characters : 1
Description : The detachment's readiness status as determined from the composite of the pilots' and aircrew individual readiness status. Functional Wing Instructions apply.

Range of Values : A, B, C, D
Example : A

Pilot and aircrew flight statistical requirements are described in OPNAVINST 3710.7L. [Ref. 17] Personal information on all detachment personnel is derived from the Division Officer's Notebook. Readiness requirements were determined from Functional Wing Requirements. (the reference for this text was COMHELSEACONWING ONE INST C3500.1C [Ref. 18])

b. Pilot Entity

****
Entity name : Pilot

Description : A qualified Naval Aviator assigned to the detachment for the purpose of conducting operational flights.

Aliases :

Attributes : Pilot First Name (P_FNAME)
Pilot Last Name (P_LNAME)
Pilot Middle Initial (P_MINIT)
Pilot Social Security Number (P_SSN)
Pilot Rank (P_RANK)
Pilot Address (P_ADD)
Pilot Telephone Number (P_TNUM)
Pilot Date-of-Birth (P_DOB)
Pilot Detachment Billet (P_BILLET)
Pilot HAC Qualification (P_HAC)
Pilot 2P Qualification (P_2P)
Pilot FCP Qualification (P_FCP)
Pilot ANI Qualification (P_ANI)
Pilot ICP Qualification (P_ICP)
Pilot Other Qualifications (P_OTH)
Pilot Total Flight Time (P_TOT)
Pilot Fiscal Year Pilot Time (P_FYP)
Pilot Fiscal Year Night Time (P_FYN)
Pilot Semi-Annual Night Time (P_SAN)

Pilot Fiscal Year Actual Instrument Time (P_FYA)
Pilot Fiscal Year Simulated Instrument Time (P_FYS)
Pilot Natops Check Due Date (P_NAT)
Pilot Instrument Check Due Date (P_INST)
Pilot Day DLQ Expiration Date (P_DDLQ)
Pilot Night DLQ Expiration Date (P_NDLQ)
Pilot Readiness Status (P_READ)
Pilot Special Achievements (P_ACH)

(1) Pilot Attributes.

****

Element name : P_FNAME
Format : Alphanumeric
No. Characters : 15

Description : The legal first name of the Pilot.

Range of Values : NA
Example : Gregory

****

Element name : P_LNAME
Format : Alphanumeric
No. Characters : 15

Description : The legal last name of the Pilot.

Range of Values : NA
Example : Smith

****

Element name : P_MINIT
Format : Alphanumeric
No. Characters : 1

Description : The Pilot's middle initial.

Range of Values : A-Z
Example : F

****

Element name : P_SSN
Format : Numeric
No. Characters : 9

Description : The unique, Federally assigned Social Security Number of the Pilot.

Range of Values : 000000000-999999999
Example : 228807484

****

Element name : P_RANK
Format : Alphanumeric
No. Characters : 4

Description : The abbreviation of the Pilot's rank.

Range of Values : NA
Example : LT

****

Element name : P_ADDRESS
Format : Alphanumeric
No. Characters : 50

Description : The Pilot's home address.

Range of Values : NA
Example : 1118 SURF AVE. PACIFIC GROVE CAL 93950

****

Element name : P_TNUM
Format : Numeric
No. Characters : 10

Description : The Pilot's home telephone number.

Range of Values : 0000000000-9999999999
Example : 4086494403

****

Element name : P_DOB
Format : Numeric
No. Characters : 8

Description : The Pilot's date-of-birth in calendar date form. MM/DD/YY.

Range of Values : MM: 01-12; DD: 01-31; YY:00-99
Example : 07/31/55

****

Element name : P_BILLET
Format : Alphanumeric
No. Characters : 25

Description : A description of the Pilot's billet in the detachment.

Range of Values : NA
Example : Maintenance Officer.

****

Element name : P_HAC
Format : Numeric
No. Characters : 1

Description : A Flag to indicate if the Pilot is a qualified Aircraft Commander.
Range of Values : 0,1
Example : 1

****

Element name : P_2P
Format : Numeric
No. Characters : 1

Description : A Flag to indicate if the Pilot is a qualified H2P.
Range of Values : 0,1
Example : 1

****

Element name : P_FCP
Format : Numeric
No. Characters : 1

Description : A Flag to indicate if the Pilot is a qualified Functional Check Pilot.

Range of Values : 0,1
Example : 1

****

Element name : P_ANI
Format : Numeric
No. Characters : 1

Description : A Flag to indicate if the Pilot is a qualified Assistant NATOPS Instructor.

Range of Values : 0,1
Example : 1

****

Element name : P_ICP
Format : Numeric
No. Characters : 1

Description : A Flag to indicate if the Pilot is a qualified Instrument Check Pilot.

Range of Values : 0,1
Example : 1

****

Element name : P_OTH
Format : Alphanumeric
No. Characters : 20

Description : A list of other significant Pilot qualifications.

Range of Values : NA
Example : Expert Guitarist

****

Element name : P_TOT
Format : Alphanumeric
No. Characters : 7

Description : Pilot's accumulated pilot time since designation as a Naval Aviator. Initial baseline is established. Base is updated with daily additions so that P_TOT = P_TOT + HAC_FP_HRS + HAC_CP_HRS after update. (if not HAC, then CP_FP_HRS + CP_CP_HRS.)

Range of Values : 00000.0-99999.9
Example : 2005.4

****

Element name : P_FYP
Format : Alphanumeric
No. Characters : 5

Description : Pilot's accumulated pilot time since the beginning of the fiscal year. Initial baseline is established. Base is updated with daily additions so that P_FYP = P_FYP + HAC_FP_HRS + HAC_CP_HRS after update. (if not HAC, then CP_FP_HRS + CP_CP_HRS.)

Range of Values : 000.0-999.9
Example : 200.4

****

Element name : P_FYN
Format : Alphanumeric
No. Characters : 5

Description : Pilot's accumulated night time since the beginning of the fiscal year. Initial baseline is established. Base is updated with daily additions so that P_FYN = P_FYN + HAC_NT_HRS after up-

date. (if not HAC, then CP_NT_HRS.)
Range of Values : 000.0-999.9
Example : 105.4

****

Element name : P_SAN
Format : Alphanumeric
No. Characters : 5

Description : Pilot's accumulated night time since the beginning of the fiscal year minus any time not included in the previous six months from time of update.

Range of Values : 000.0-999.9
Example : 105.4

****

Element name : P_FYA
Format : Alphanumeric
No. Characters : 5

Description : Pilot's accumulated actual instrument time since the beginning of the fiscal year. Initial baseline is established. Base is updated with daily additions so that P_FYA = P_FYA + HAC_ACT_HRS after update. (if not HAC, then CP_ACT_HRS.)
Range of Values : 000.0-999.9
Example : 105.4

****

Element name : P_FYS
Format : Alphanumeric
No. Characters : 5

Description : Pilot's accumulated simulated instrument time since the beginning of the fiscal year. Initial baseline is established. Base is updated with daily additions so that P_FYS = P_FYS + HAC_SIM_HRS after update. (if not HAC, then CP_SIM_HRS.)
Range of Values : 000.0-999.9
Example : 105.4

****

Element name : P_NAT
Format : Alphanumeric
No. Characters : 8

Description : The due date of the Pilot's Annual NATOPS check. NATOPS qualifications are valid for twelve months from the last day of the month of the evaluation.

Range of Values : MM: 01-12; DD: 01-31; YY:00-99
Example : 07/31/55

****

Element name : P_INST
Format : Alphanumeric
No. Characters : 8

Description : The due date of the Pilot's Annual Instrument check. Pilot's are required to renew instrument ratings prior to the last day of their birth month.

Range of Values : MM: 01-12; DD: 01-31; YY:00-99
Example : 07/31/55

****

Element name : P_DDLQ
Format : Alphanumeric
No. Characters : 8

Description : The date that the Pilot's Day DLQ currency expires. Functional Wing Instructions apply.

Range of Values : MM: 01-12; DD: 01-31; YY:00-99
Example : 07/31/55

****

Element name : P_NDLQ
Format : Alphanumeric
No. Characters : 8

Description : The date that the Pilot's Night DLQ currency expires. Functional Wing Instructions apply.

Range of Values : MM: 01-12; DD: 01-31; YY:00-99
Example : 07/31/55

********** **********

Element name : P_READ
Format : Alphanumeric
No. Characters : 1

Description : The Pilot's Readiness Status. Functional Wing Instructions apply.

Range of Values : A, B, C, D
Example : A

****

Element name : P_ACH
Format : Alphanumeric
No. Characters : 50

Description : A list of other significant Pilot achievements.

Range of Values : NA
Example : Survived Subic.

c. Aircrewman Entity

****

Entity name : Aircrewman

Description : A NATOPS qualified designated aircrew member assigned to the detachment to perform operational flights and routine aircraft maintenance.

Aliases : Crewman, AW
Attributes : Aircrewman First Name (AC_FNAME)
Aircrewman Last Name (AC_LNAME)
Aircrewman Middle Initial (AC_MINIT)
Aircrewman Social Security Number (AC_SSN)
Aircrewman Rate (AC_RATE)
Aircrewman Address (AC_ADD)
Aircrewman Telephone Number (AC_TNUM)
Aircrewman Date of Birth (AC_DOB)
Aircrewman Projected Rotation Date (AC_PRD)
Aircrewman Detachment Billet (AC_BILLET)
Aircrewman SAR Qualification (AC_SAR)
Aircrewman Plane Captain Qualifications (AC_PCQ)
Aircrewman Other Qualifications (AC_OTH)
Aircrewman Total Flight Time (AC_TOT)
Aircrewman Fiscal Year Flight Time (AC_FYT)
Aircrewman Natops Check Due Date (AC_NAT)
Aircrewman Day SAR Expiration Date (AC_DSAR)
Aircrewman Night SAR Expiration Date (AC_NSAR)
Aircrewman Readiness Status (AC_READ)
Aircrewman Next Eval Due Date (AC_EVAL)
Aircrewman Advancement Eligibility Date (AC_ADV)

Aircrewman Special Achievements (AC_ACH)

(1) Aircrewman Attributes.

****

Element name : AC_FNAME
Format : Alphanumeric
No. Characters : 15

Description : The legal first name of the Aircrewman.

Range of Values : NA
Example : Gregory

****

Element name : AC_LNAME
Format : Alphanumeric
No. Characters : 15

Description : The legal last name of the Aircrewman.

Range of Values : NA
Example : Smith

****

Element name : AC_MINIT
Format : Alphanumeric
No. Characters : 1

Description : The Aircrewman's middle initial.

Range of Values : A-Z
Example : F

****

Element name : AC_SSN
Format : Numeric
No. Characters : 9

Description : The unique, Federally assigned Social Security Number of the Aircrewman.

Range of Values : 000000000-999999999
Example : 228807484

****

Element name : AC_RATE
Format : Alphanumeric
No. Characters : 4

Description : The abbreviation of the Aircrewman's rate.

```
Range of Values :   NA
Example         :   AW3
*****************************************************************
Element name    :   AC_ADDRESS
Format          :   Alphanumeric
No. Characters  :   50

Description     :   The Aircrewman's home address.

Range of Values :   NA
Example         :   1118 SURF AVE. PACIFIC GROVE CAL 93950
*****************************************************************
Element name    :   AC_TNUM
Format          :   Numeric
No. Characters  :   10

Description     :   The Aircrewman's home telephone number.

Range of Values :   0000000000-9999999999
Example         :   4086494403
*****************************************************************
Element name    :   AC_DOB
Format          :   Numeric
No. Characters  :   8

Description     :   The  Aircrewman's  date-of-birth  in
                    calendar date form. MM/DD/YY.

Range of Values :   MM: 01-12; DD: 01-31; YY:00-99
Example         :   07/31/55
*****************************************************************
Element name    :   AC_BILLET
Format          :   Alphanumeric
No. Characters  :   25

Description     :   A description of the Aircrewman's bil-
                    let in the detachment.

Range of Values :   NA
Example         :   Lead Aircrewman.
*****************************************************************
Element name    :   AC_SAR
Format          :   Numeric
No. Characters  :   1

Description     :   A Flag to indicate if the Aircrewman is
                    a  qualified SAR swimmer.

Range of Values :   0,1
Example         :   1
```

****

Element name : AC_PCQ
Format : Numeric
No. Characters : 1

Description : A Flag to indicate if the Aircrewman is a qualified plane captain.

Range of Values : 0, 1
Example : 1

****

Element name : AC_OTH
Format : Alphanumeric
No. Characters : 20

Description : A list of other significant Aircrewman qualifications.

Range of Values : NA
Example : Expert Russian Linguist

****

Element name : AC_TOT
Format : Alphanumeric
No. Characters : 7

Description : Aircrewman's accumulated flight time since designation as a Naval Aircrewman. Initial baseline is established. Base is updated with daily additions.

Range of Values : 00000.0-99999.9
Example : 2005.4

****

Element name : AC_FYT
Format : Alphanumeric
No. Characters : 5

Description : Aircrewman's accumulated flight time since the beginning of the fiscal year. Initial baseline is established. Base is updated with daily additions.

Range of Values : 000.0-999.9
Example : 200.4

****

Element name : AC_NAT
Format : Alphanumeric
No. Characters : 8

Description : The due date of the Aircrewman's Annual

NATOPS check. NATOPS qualifications are valid for twelve months from the last day of the month of the evaluation.

Range of Values : MM: 01-12; DD: 01-31; YY:00-99
Example : 07/31/55

****

Element name : AC_DSAR
Format : Alphanumeric
No. Characters : 8

Description : The date that the Aircrewman's Day SAR currency expires. Functional Wing Instructions apply.

Range of Values : MM: 01-12; DD: 01-31; YY:00-99
Example : 07/31/55

****

Element name : AC_NSAR
Format : Alphanumeric
No. Characters : 8

Description : The date that the Aircrewman's Night SAR currency expires. Functional Wing Instructions apply.

Range of Values : MM: 01-12; DD: 01-31; YY:00-99
Example : 07/31/55

****

Element name : AC_READ
Format : Alphanumeric
No. Characters : 1

Description : The Aircrewman's Readiness Status. Functional Wing Instructions apply.

Range of Values : A, B, C, D
Example : A

****

Element name : AC_ACH
Format : Alphanumeric
No. Characters : 50

Description : A list of other significant Aircrewman achievements.

Range of Values : NA
Example : PACE graduate

****

Element name : AC_ADV
Format : Numeric

No. Characters : 8
Description : The date the Aircrewman will be eligible to begin rate advancement procedures. In calendar date form. MM/DD/YY.
Range of Values : MM: 01-12; DD: 01-31; YY:00-99
Example : 07/31/55

****

Element name : AC_EVAL
Format : Numeric
No. Characters : 8

Description : The date the Aircrewman's next evaluation will be due. In calendar date form. MM/DD/YY.

Range of Values : MM: 01-12; DD: 01-31; YY:00-99
Example : 07/31/55

****

d. Member Entity

****

Entity name : Member

Description : An enlisted member assigned to the detachment to perform maintenance on the detachment aircraft, and conduct flight deck evolutions.

Aliases :
Attributes : Member First Name (M_FNAME)
Member Last Name (M_LNAME)
Member Middle Initial (M_MINIT)
Member Social Security Number (M_SSN)
Member Rate (M_RATE)
Member Address (M_ADD)
Member Telephone Number (M_TNUM)
Member Date of Birth (M_DOB)
Member Projected Rotation Date (M_PRD)
Member Detachment Billet (M_BILLET)
Member Plane Captain Qualifications (M_PCQ)
Member QAR Qualification (M_QAR)
Member CDI Qualification (M_CDI)
Member Next Eval Due Date (M_EVAL)
Member Advancement Eligibility Date (M_ADV)
Member Special Achievements (M_ACH)

(1) Member Attributes.

****

Element name : M_FNAME
Format : Alphanumeric
No. Characters : 15

Description : The legal first name of the Member.

Range of Values : NA
Example : Thomas

****

Element name : M_LNAME
Format : Alphanumeric
No. Characters : 15

Description : The legal last name of the Member.

Range of Values : NA
Example : Jones

****

Element name : M_MINIT
Format : Alphanumeric
No. Characters : 1

Description : The Member's middle initial.

Range of Values : A-Z
Example : F

****

Element name : M_SSN
Format : Numeric
No. Characters : 9

Description : The unique, Federally assigned Social Security Number of the Member.

Range of Values : 000000000-999999999
Example : 228807484

****

Element name : M_RATE
Format : Alphanumeric
No. Characters : 4

Description : The abbreviation of the Member's rate.

Range of Values : NA
Example : AD2

****

Element name : M_ADDRESS
Format : Alphanumeric

No. Characters : 50

Description : The Member's home address.

Range of Values : NA
Example : 1118 SURF AVE. PACIFIC GROVE CAL 93950

****

Element name : M_TNUM
Format : Numeric
No. Characters : 10

Description : The Member's home telephone number.

Range of Values : 0000000000-9999999999
Example : 4086494403

****

Element name : M_DOB
Format : Numeric
No. Characters : 8

Description : The Member's date-of-birth in calendar date form. MM/DD/YY.

Range of Values : MM: 01-12; DD: 01-31; YY:00-99
Example : 07/31/55

****

Element name : M_BILLET
Format : Alphanumeric
No. Characters : 25

Description : A description of the Member's billet in the detachment.

Range of Values : NA
Example : Lead Mechanic

****

Element name : M_QAR
Format : Numeric
No. Characters : 1

Description : A Flag to indicate if the Member is a qualified Quality Assurance Representative.

Range of Values : 0, 1
Example : 1

****

Element name : M_PCQ
Format : Numeric
No. Characters : 1

Description : Flag to indicate if the Member is a qualified plane captain.

Range of Values : 0, 1
Example : 1

****

Element name : M_CDI
Format : Numeric
No. Characters : 1

Description : A Flag to indicate if the Member is a qualified colateral duty inspector.

Range of Values : 0, 1
Example : 1

****

Element name : M_OTH
Format : Alphanumeric
No. Characters : 20

Description : A list of other significant Member qualifications.

Range of Values : NA
Example : Cross-rate CDI

****

Element name : M_ACH
Format : Alphanumeric
No. Characters : 50

Description : A list of other significant Member achievements.

Range of Values : NA
Example : Sailor of the Month

****

Element name : M_ADV
Format : Numeric
No. Characters : 8

Description : The date the Member will be eligible to begin rate advancement procedures. In calendar date form. MM/DD/YY.

Range of Values : MM: 01-12; DD: 01-31; YY:00-99
Example : 07/31/55

****

Element name : M_EVAL
Format : Numeric
No. Characters : 8

Description : The date the Member's next evaluation will be due. In calendar date form. MM/DD/YY.

Range of Values : MM: 01-12; DD: 01-31; YY:00-99
Example : 07/31/55

****

2. Flight Entities

The data fields for the flight entity were derived mostly from OPNAVINST 3710.7L, including the description of the Naval Aircraft Flight Record (OPNAV 3760/2 or "yellow sheet"), the source of most data for updating records based on flying hours.

a. Flight Entity

****

Entity name : Flight

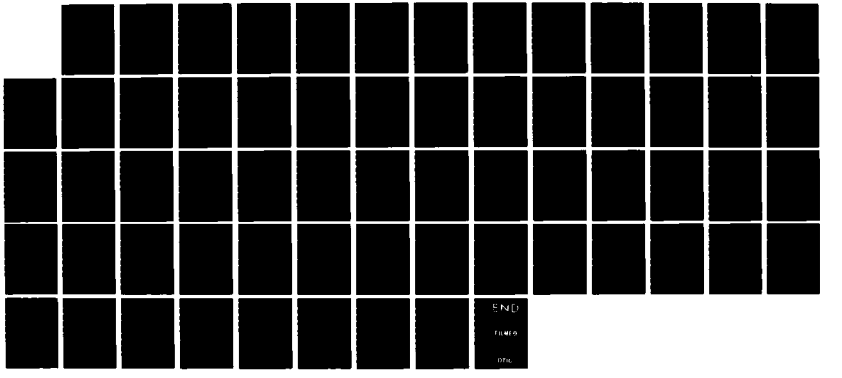
Description : One or more aircraft proceeding on a common mission. For record and recording purposes, a flight begins when the aircraft first moves forward on its takeoff run or takes off vertically from rest at any point of support, and ends after airborne flight when the rotors are disengaged or the aircraft has been stationary for 3 minutes with the rotors engaged, or if a change has been made in the pilot-in-command.

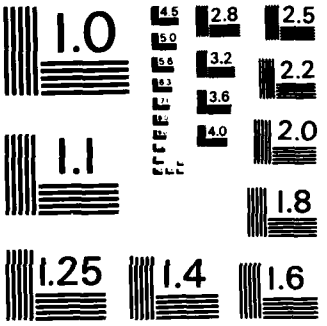
Aliases :
Attributes : HAC Last Name (HAC_LNAME)
Flight Julian Date (FLT_JD)
Flight Take Off Time (FLT_T/O TIME)
Flight Identifier = HAC_LNAME + FLT_JD + FLT_T/O TIME (FLT_ID)
Flight Purpose Code (FPC)
Aircraft BUNO (AC_BUNO)
Helicopter Aircraft Commander Social Security Number (HAC_SSN)
HAC First Pilot Hrs. (HAC_FP_HRS)
HAC Co-pilot hrs. (HAC_CP_HRS)
HAC Special Crew hrs. (HAC_SP_HRS)
HAC Aircraft Commander Hrs. (HAC_AC_HRS)
HAC Actual Instrument Hrs (HAC_ACT_INS

HAC Simulated Instrument Hrs (HAC_SIM_HRS)
HAC Night Time (HAC_NT_HRS)
HAC Landings code 1 (HAC_LD_1)
HAC Landings code A (HAC_LD_A)
HAC Landings code 6 (HAC_LD_6)
HAC Landings code F (HAC_LD_F)
HAC Approaches code 1 (HAC_AP_1)
HAC Approaches code 2 (HAC_AP_2)
HAC Approaches code 3 (HAC_AP_3)
HAC Approaches code A (HAC_AP_A)
HAC Approaches code B (HAC_AP_B)
HAC Approaches code C (HAC_AP_C)
Co-Pilot
Social Security Number (CP_SSN)
CP Last Name (CP_LNAME)
CP First Pilot Hrs. (CP FP_HRS)
CP Co-pilot hrs. (CP_CP_HRS)
CP Special Crew hrs. (CP_SP_HRS)
CP Actual Instrument Hrs (CP_ACT_HRS)
CP Simulated Instrument Hrs (CP_SIM_HRS)
CP Night Time (CP_NT_HRS)
CP Landings code 1 (CP_LD_1)
CP Landings code A (CP_LD_A)
CP Landings code 6 (CP_LD_6)
CP Landings code F (CP_LD_F)
CP Approaches code 1 (CP_AP_1)
CP Approaches code 2 (CP_AP_2)
CP Approaches code 3 (CP_AP_3)
CP Approaches code A (CP_AP_A)
CP Approaches code B (CP_AP_B)
CP Approaches code C (CP_AP_C)
Flight Total Hrs. = HAC_FP_HRS + CP_FP_HRS (FLT_TOT_HRS)
Total Landings code 1 = HAC_LD_1 + CP_LD_1 (TOT_LD_1)
Total Landings code A = HAC_LD_A + CP_LD_A (TOT_LD_A)
Total Landings code 6 = HAC_LD_6 + CP_LD_6 (TOT_LD_6)
Total Landings code F = HAC_LD_F + CP_LD_F (TOT_LD_F)
Crewman last name (CM_LNAME)
Crewman SSN (CM_SSN)
Crewman Flt. Time (CM_FLT_TIME)
ASW Hours Day (ASW_HRS_D)
ASW Hours Night (ASW_HRS_N)
ASST Hours Day (ASST_HRS_D)
ASST Hours Night (ASST_HRS_N)
Training Hours Day (TRG_HRS_D)

AD-A162 366 MICROCOMPUTER-BASED DETACHMENT ADMINISTRATIVE MANAGEMENT SYSTEM FOR THE L..(U) NAVAL POSTGRADUATE SCHOOL MONTEREY CA G F SMITH SEP 85 2/2

UNCLASSIFIED F/G 9/2 NL





Training Hours Night (TRG_HRS_N)
Utility Hours Day (UT_HRS_D)
Utility Hours Night (UT_HRS_N)
Number of Passengers (NO_PAX)
Number Pounds Cargo (LBS_CGO)
FCF Hours Day (FCF_HRS_D)
FCF Hours Night (FCF_HRS_N)

(1) Flight Attributes.

****

Element name : HAC_LNAME
Format : Alphanumeric
No. Characters : 15

Description : The legal last name of the Helicopter Aircraft Commander (HAC) or Pilot-in-Command. The HAC is assigned responsibility for safe and orderly conduct of the flight and his signature of acceptance of the aircraft for flight binds him to this responsibility.

Range of Values : NA
Example : Smith

****

Element name : FLT_JD
Format : Numeric
No. Characters : 4

Description : The Julian Date that the flight commences.
Range of Values : Year: 0-9
Day: 001-365
Examole : 5359 (25 Dec 85)

****

Element name : FLT_T/O TIME
Format : Numeric
No. Characters : 4
Description : The time logged that the aircraft commenced flight.

Range of Values : 0000-2359
Example : 0530

****

Element name : FPC
Format : Alphanumeric
No. Characters : 3

Description : A three character code defining the primary purpose of the flight. FPCs are found in OPNAVINST 3710.7L. The three characters have separate meanings. The first denotes type operations and aviator status, the second, the general purpose of the flight, and the third, the specific purpose of the flight.

Range of Values : (1) A,1,C,3,D,E
(2) A-N, P-Z
(3) 0-9

Example : 1A2

****

Element name : HAC_SSN
Format : Numeric
No. Characters : 9

Description : The unique, Federally assigned Social Security Number of the HAC.

Range of Values : 000000000-999999999
Example : 228807484

****

Element name : HAC_FP_HRS
Format : Alphanumeric
No. Characters : 4

Description : The portion of pilot time logged during which the HAC is positioned with access to the flight controls and is exercising principal active control of the aircraft. Logged as hours and tenths of hours.

Range of Values : 00.1-10.0
Example : 2.5

****

Element name : HAC_CP_HRS
Format : Alphanumeric
No. Characters : 4
Description : The portion of pilot time logged during which the HAC is positioned with access to the flight controls and is assisting the pilot exercising principal control of the aircraft. Logged as hours and tenths of hours.

Range of Values : 00.1-10.0
Example : 1.3

****

Element name : HAC_SP_HRS
Format : Alphanumeric
No. Characters : 4

Description : The portion of flight time logged by the HAC while not acting as first pilot or copilot, but otherwise serving as a member of the authorized crew. Logged as hours and tenths of hours.
Range of Values : 00.1-10.0
Example : 1.3

****

Element name : HAC_AC_HRS
Format : Alphanumeric
No. Characters : 4

Description : The individual flight time during which an individual, designated as a qualified aircraft commander in the aircraft being flown, is serving as pilot-in-command. For a designated HAC, HAC_AC_HRS = HAC_FP_HRS + HAC_CP_HRS. Logged as hours and tenths of hours.

Range of Values : 00.1-10.0
Example : 1.3

****

Element name : HAC_ACT_HRS
Format : Alphanumeric
No. Characters : 4

Description : The pilot time accrued while the aircraft is flown in actual instrument conditions. Actual time is credited to both the HAC and copilot. Logged as hours and tenths of hours.
Range of Values : 00.1-10.0
Example : 1.3

****

Element name : HAC_SIM_HRS
Format : Alphanumeric
No. Characters : 4

Description : The pilot time accrued while the aircraft is flown in simulated instrument conditions. Simulated time is credited to the HAC only when he is exercising principal control of the aircraft. Logged as hours and tenths of hours.

Range of Values : 00.1-10.0
Example : 1.3

****

Element name : HAC_NT_HRS
Format : Alphanumeric
No. Characters : 4

Description : The pilot time accrued while the aircraft is flown between official sunset and sunrise. Logged as hours and tenths of hours.

Range of Values : 00.1-10.0
Example : 1.3

****

Element name : HAC_LD_1
Format : Numeric
No. Characters : 2

Description : The number of landings the HAC logged under code 1 (ship/day).

Range of Values : 01-99
Example : 22

****

Element name : HAC_LD_A
Format : Numeric
No. Characters : 2

Description : The number of landings the HAC logged under code A (ship/night).

Range of Values : 01-99
Example : 10

****

Element name : HAC_LD_6
Format : Numeric
No. Characters : 2

Description : The number of landings the HAC logged under code 6 (field/day).

Range of Values : 01-99
Example : 10

****

Element name : HAC_LD_F
Format : Numeric
No. Characters : 2

Description : The number of landings the HAC logged under code F (field/night).

Range of Values : 01-99
Example : 10

****

Element name : HAC_AP_1
Format : Numeric
No. Characters : 2

Description : The number of approaches the HAC logged under code 1 (precision/actual).

Range of Values : 01-99
Example : 10

****

Element name : HAC_AP_2
Format : Numeric
No. Characters : 2

Description : The number of approaches the HAC logged under code 2 (non-precision/actual).

Range of Values : 01-99
Example : 10

****

Element name : HAC_AP_3
Format : Numeric
No. Characters : 2

Description : The number of approaches the HAC logged under code 3 (automatic/actual).

Range of Values : 01-99
Example : 10

****

Element name : HAC_AP_A
Format : Numeric
No. Characters : 2

Description : The number of approaches the HAC logged under code A (precision/simulated).

Range of Values : 01-99
Example : 10

****

Element name : HAC_AP_B
Format : Numeric
No. Characters : 2

Description : The number of approaches the HAC logged under code B (non-precision/simulated).

Range of Values : 01-99
Example : 10

****

Element name : HAC_AP_C
Format : Numeric
No. Characters : 2

Description : The number of approaches the HAC logged under code C (automatic/simulated).

Range of Values : 01-99
Example : 10

****

Element name : CP_SSN
Format : Numeric
No. Characters : 9

Description : The unique, Federally assigned Social Security Number of the copilot (CP).

Range of Values : 000000000-999999999
Example : 228807484

****

Element name : CP_LNAME
Format : Alphanumeric
No. Characters : 15

Description : The legal last name of the copilot.

Range of Values : NA
Example : Smith

****

Element name : CP_FP_HRS
Format : Alphanumeric
No. Characters : 4

Description : The portion of pilot time logged during which the CP is positioned with access to the flight controls and is exercising principal active control of the aircraft. Logged as hours and tenths of hours.

Range of Values : 00.1-10.0
Example : 2.5

****

Element name : CP_CP_HRS
Format : Alphanumeric
No. Characters : 4

Description : The portion of pilot time logged during which the CP is positioned with access

to the flight controls and is assisting the pilot exercising principal control of the aircraft. Logged as hours and tenths of hours.

Range of Values : 00.1-10.0
Example : 1.3

****

Element name : CP_SP_HRS
Format : Alphanumeric
No. Characters : 4

Description : The portion of flight time logged by the CP while not acting as first pilot or copilot, but otherwise serving as a member of the authorized crew. Logged as hours and tenths of hours.

Range of Values : 00.1-10.0
Example : 1.3

****

Element name : CP_ACT_HRS
Format : Alphanumeric
No. Characters : 4

Description : The pilot time accrued while the aircraft is flown in actual instrument conditions. Actual time is credited to both the HAC and copilot. Logged as hours and tenths of hours.

Range of Values : 00.1-10.0
Example : 1.3

****

Element name : CP_SIM_HRS
Format : Alphanumeric
No. Characters : 4

Description : The pilot time accrued while the aircraft is flown in simulated instrument conditions. Simulated time is credited to the CP only when he is exercising principal control of the aircraft. Logged as hours and tenths of hours.

Range of Values : 00.1-10.0
Example : 1.3

****

Element name : CP_NT_HRS
Format : Alphanumeric
No. Characters : 4

Description : The pilot time accrued while the aircraft is flown between official sunset and sunrise. Logged as hours and tenths of hours.

Range of Values : 00.1-10.0
Example : 1.3

****

Element name : CP_LD_1
Format : Numeric
No. Characters : 2

Description : The number of landings the CP logged under code 1 (ship/day).

Range of Values : 01-99
Example : 22

****

Element name : CP_LD_A
Format : Numeric
No. Characters : 2

Description : The number of landings the CP logged under code A (ship/night).

Range of Values : 01-99
Example : 10

****

Element name : CP_LD_6
Format : Numeric
No. Characters : 2

Description : The number of landings the CP logged under code 6 (field/day).

Range of Values : 01-99
Example : 10

****

Element name : CP_LD_F
Format : Numeric
No. Characters : 2

Description : The number of landings the CP logged under code F (field/night).

Range of Values : 01-99
Example : 10

****

Element name : CP_AP_1
Format : Numeric

No. Characters : 2

Description : The number of approaches the CP logged under code 1 (precision/actual).

Range of Values : 01-99
Example : 10

****

Element name : CP_AP_2
Format : Numeric
No. Characters : 2

Description : The number of approaches the CP logged under code 2 (non-precision/actual).

Range of Values : 01-99
Example : 10

****

Element name : CP_AP_3
Format : Numeric
No. Characters : 2

Description : The number of approaches the CP logged under code 3 (automatic/actual).

Range of Values : 01-99
Example : 10

****

Element name : CP_AP_A
Format : Numeric
No. Characters : 2

Description : The number of approaches the CP logged under code A (precision/simulated).

Range of Values : 01-99
Example : 10

****

Element name : CP_AP_B
Format : Numeric
No. Characters : 2

Description : The number of approaches the CP logged under code B (non-precision/simulated).

Range of Values : 01-99
Example : 10

****

Element name : CP_AP_C
Format : Numeric

No. Characters : 2

Description : The number of approaches the CP logged under code C (automatic/simulated).

Range of Values : 01-99
Example : 10

****

Element name : CM_LNAME
Format : Alphanumeric
No. Characters : 15

Description : The legal last name of the aircrewman.

Range of Values : NA
Example : Smith

****

Element name : CM_SSN
Format : Numeric
No. Characters : 9

Description : The unique, Federally assigned Social Security Number of the aircrewman.

Range of Values : 000000000-999999999
Example : 228807484

****

Element name : CM_FLT_TIME
Format : Alphanumeric
No. Characters : 4

Description : The time logged by an aircrewman while serving in an official aircrew capacity. Logged in hours and tenths of hours.

Range of Values : 00.1-10.0
Example : 3.6

****

Element name : ASW_HRS_D and ASW_HRS_N
Format : Alphanumeric
No. Characters : 4

Description : That portion of a flight during which actual or simulated Anti-submarine warfare is conducted. Logged in hours and tenths of hours.

Range of Values : 00.1-10.0
Example : 3.6

****

Element name : ASST_HRS_D and ASST_HRS_N
Format : Alphanumeric
No. Characters : 4

Description : That portion of a flight during which Anti-ship surveillance and targeting, actual or simulated, is conducted. Logged in hours and tenths of hours.

Range of Values : 00.1-10.0
Example : 3.6

****

Element name : TRG_HRS_D and TRG_HRS_N
Format : Alphanumeric
No. Characters : 4

Description : That portion of a flight during which training is conducted. Logged in hours and tenths of hours.

Range of Values : 00.1-10.0
Example : 3.6

****

Element name : UT_HRS_D and UT_HRS_N
Format : Alphanumeric
No. Characters : 4

Description : That portion of a flight during which utility missions are performed. Logged in hours and tenths of hours.

Range of Values : 00.1-10.0
Example : 3.6

****

Element name : NO_PAX
Format : Numeric
No. Characters : 2

Description : The number of passengers carried on the flight.

Range of Values : 01-50
Example : 10

****

Element name : LBS_CGO
Format : Numeric
No. Characters : 4

Description : The approximate number of pounds of cargo transported during the flight.

Range of Values : 0001-9999
Example : 500

****

Element name : FCF_HRS_D and FCF_HRS_N
Format : Alphanumeric
No. Characters : 4

Description : That portion of a flight during which Functional Check flights were is conducted. Logged in hours and tenths of hours.
Range of Values : 00.1-10.0
Example : 3.6

3. Maintenance Entities

The information relating to maintenance on the detachment aircraft may be found in OPNAVINST 4790 series and the SH-2F maintenance manuals.

a. Aircraft Entity

****

Entity name : Aircraft

Description : The helicopter assigned to a detachment for which the detachment assumes all maintenance, safety, and reporting responsibilities.

Aliases : Helicopter
Attributes : Aircraft Bureau Number (AC_BUNO)
Aircraft Side Number (AC_SNUM)
Aircraft Model Designation (AC_MDS)
Aircraft Reporting Custodian Name (AC_RC_NAME)
Aircraft Reporting Custodian UIC (AC_RC_UIC)
Aircraft Controlling Custodian Name (AC_CC_NAME)
Aircraft Controlling Custodian UIC (AC_CC_UIC)
Aircraft Period Number (AC_PER_NUM)
Aircraft Period End Date (AC_PED)
Aircraft Extension Number (AC_EXT_NUM)
Aircraft Type Equipment Code (TEC)
Aircraft Acceptance Date (AC_ACC_DATE)

Aircraft Operating Months (AC_OP_MOS)
Aircraft Hours in Period (AC_PER_HRS)
Aircraft Status Code (AC_STATUS)

(1) Aircraft Attributes.

****

Element name : AC_BUNO
Format : Numeric
No. Characters : 6
Description : The unique identifier assigned to all Naval Aircraft.

Range of Values : 000000-999999
Example : 193445

****

Element name : AC_NUM
Format : Alphanumeric
No. Characters : 5

Description : An identifier assigned to squadron aircraft consisting of two alphabetic characters followed by a 3-digit number.

Range of Values : Alpha: A-Z ; Numeric: 000-999
Example : HV 134

****

Element name : AC_MOD
Format : Alphanumeric
No. Characters : 5

Description : The Navy's assigned model designation for an aircraft. The LAMPS helicopter is designated SH-2F.

Range of Values : Alpha: A-Z ; Numeric: 1-9
Example : SH-2F
(Note: the "-" may be omitted in some applications.)

****

Element name : AC_RC_NAME
Format : Alphanumeric
No. Characters : 13

Description : The activity maintaining reporting responsibility for an aircraft. For LAMPS detachments, this is the "DETACHMENT NAME."

Range of Values : Alpha: A-Z ; Numeric: 1-9
Example : HSL-32 Det 1

****

Element name : AC_RC_UIC
Format : Numeric
No. Characters : 5

Description : The unit identification code of the activity maintaining reporting responsibility for an aircraft. For LAMPS detachments, this is the "DETACHMENT UNIT IDENTIFICATION CODE."

Range of Values : 00001-99999
Example : 21405

****

Element name : AC_CC_NAME
Format : Alphanumeric
No. Characters : 20

Description : The name of the organization which maintains overall authority and responsibility for the detachment aircraft. For LAMPS detachments, this is either COMNAVAIRLANT or COMNAVAIRPAC.

Range of Values : NA
Example : COMNAVAIRLANT

****

Element name : AC_CC_UIC
Format : Numeric
No. Characters : 5

Description : The unit identification code of the organization which maintains overall authority and resoonsibility for the detachment aircraft. For LAMPS detachments, this is either COMNAVAIRLANT or COMNAVAIRPAC.

Range of Values : 000001-99999
Example : 21405

****

Element name : AC_PER_NUM
Format : Numeric
No. Characters : 3

Description : The service period in which the aircraft is now operating. Precede with zeros to make 3-digit number.

Range of Values : 001-999
Example : 004

****

Element name : AC_PED
Format : Numeric
No. Characters : 4

Description : The month and year the aircraft is expected to complete an operating service period of standard duration. (date period completed, if aircraft is on an extension.) Format MMYY where MM is the number of the month and YY is the last two digits of the year.

Range of Values : MM: 01-12 YY: 00-99
Example : 1184 (November 1984)

****

Element name : AC_EXT_NUM
Format : Numeric
No. Characters : 2

Description : Indicates the number of the service period extension in which the aircraft is now serving.

Range of Values : 01-99
Example : 03

****

Element name : TEC
Format : Alphanumeric
No. Characters : 4

Description : Indicates the 3M designation of the aircraft. The code for the SH-2F is AHBH.

Range of Values : NA
Example : AHBH

****

Element name : AC_ACC_DATE
Format : Numeric
No. Characters : 6

Description : The month, day and year that the aircraft was accepted into the Naval Aircraft Inventory. Expressed as MMDDYY.

Range of Values : MM: 01-12 DD: 01-31 YY: 00-99
Example : 121583 (15 December 1983)

****

Element name : AC_OP_MOS
Format : Numeric
No. Characters : 3

Description : This number will represent the total accumulation of operating service months as of the end of the month and year reported as AC_PED. Complete with leading zeros to make 3 digits.

Range of Values : 001-999
Example : 022

****

Element name : AC_PER_HRS
Format : Alphanumeric
No. Characters : 6

Description : Represents the total flight hours accumulated since the beginning of the current period. Updated with each flight entry. Reported as hours and tenths of hours.

Range of Values : 0000.0-9999.9
Examole : 1024.6

****

Element name : AC_STATUS
Format : Numeric
No. Characters : 1

Description : The total number of aircraft in A/B reportable readiness status.

Range of Values : 0-3
Example : 1

b. Engine Entity

****

Entity name : Engine

Description : The separately accountable component installed in the aircraft or stored aboard ship.

Aliases : Powerplant
Attributes : Engine Serial Number (ENG_SER_NUM)
Engine Type/model (ENG_MOD)

Engine Series (ENG_SER)
Engine Reporting Custodian Name (ENG_RC_NAME)
Engine Reporting Custodian UIC (ENG_RC_UIC)
Engine Position Number (ENG_POS)
Engine Controlling Custodian Name (ENG_CC_NAME)
Engine Controlling Custodian UIC (ENG_CC_UIC)
Engine Flight Operating Hrs. Since New (ENG_TSN)
Engine Replacement Interval (ENG_INT)
Engine Time Remaining Until Replacement (ENG_T_RMNG)
Engine Extension Interval (ENG_EXT)
Engine Time Remaining on Extension (ENG_EXT_RMNG)

(1) Engine Attributes.

****

Element name : ENG_SER_NUM
Format : Alphanumeric
No. Characters : 7

Description : The seven-digit field used to identify each engine, assembly, or section of an engine. If ser. number less than seven digits, complete with leading zeros.

Range of Values : 0000000-9999999
Example : 0051164

****

Element name : ENG_MOD
Format : Alphanumeric
No. Characters : 7

Description : A Maximum 7-character field used to identify the type/model of the engine. No dashes, slashes or spaces.

Range of Values : NA
Example : T58

****

Element name : ENG_SER
Format : Alphanumeric
No. Characters : 5
Description : A Maximum 5-character field used to

identify the engine series or "dash". No dashes, slashes or spaces.

Range of Values : NA
Example : 8F

****

Element name : ENG_RC_NAME
Format : Alphanumeric
No. Characters : 13

Description : The activity maintaining reporting responsibility for an engine. For LAMPS detachments, this is the "DETACHMENT NAME."

Range of Values : Alpha: A-Z ; Numeric: 1-9
Example : HSL-32 Det 1

****

Element name : ENG_RC_UIC
Format : Numeric
No. Characters : 5

Description : The unit identification code of the activity maintaining reporting responsibility for an engine. For LAMPS detachments, this is the "DETACHMENT UNIT IDENTIFICATION CODE."

Range of Values : 00001-99999
Example : 21405

****

Element name : ENG_CC_NAME
Format : Alphanumeric
No. Characters : 20

Description : The name of the organization which maintains overall authority and accountability for the detachment engines. For LAMPS detachments, this is either COMNAVAIRLANT or COMNAVAIRPAC.
Range of Values : NA
Example : COMNAVAIRLANT

****

Element name : ENG_CC_UIC
Format : Numeric
No. Characters : 5

Description : The unit identification code of the organization which maintains overall authority and accountability for the

detachment aircraft. For LAMPS detachments, this is either COMNAVAIR-LANT or COMNAVAIRPAC.

Range of Values : 000001-99999
Example : 21405

****

Element name : ENG_POS
Format : Numeric
No. Characters : 1

Description : A one character field to indicate position of the engine on the aircraft. A "1" is the left on SH2F, "2" is the right.

Range of Values : 1,2
Example : 2

****

Element name : ENG_TSN
Format : Numeric
No. Characters : 5

Description : A five-character field used to indicate flight/operating hours on the engine accumulated since new. Reported in whole hours only, unrounded. Add leading zeros to complete five digits.

Range of Values : 00000-99999
Example : 00528

****

Element name : ENG_INT
Format : Numeric
No. Characters : 4

Description : The required replacement interval of an installed engine measured in whole flight hours.

Range of Values : 0000-9999
Example : 2000

****

Element name : ENG_EXT
Format : Numeric
No. Characters : 3

Description : The allowable extension interval of an installed engine measured in whole flight hours.

Range of Values : 000-999
Example : 200

****

Element name : ENG_T_RMNG
Format : Numeric
No. Characters : 4

Description : The number of hours remaining until an extension is required. It is computed by subtracting the daily flight time from the base flight time. The base is then updated to reflect the change.

Range of Values : 0000-9999
Example : 2000

****

Element name : ENG_EXT_RMNG
Format : Numeric
No. Characters : 3

Description : The number of hours remaining until an extension is exhausted.

Range of Values : 000-999
Example : 200

****

c. Component Entity

****

Entity name : Component

Description : Any of a number of aircraft parts which require periodic replacement. Required replacement intervals are contained in the SH-2F Maintenance manuals.

Aliases : High-time Component
Attributes : Component Nomenclature (C_NAME)
Component Serial Number (C_SER_NUM)
Component Part Number (C_PART_NUM)
Component Flight Operating Hrs. Since Overhaul (C_TSO)
Component Replacement Interval (C_INT)
Component Time Remaining Until Replacement (C_T_RMNG)
Component Extension Interval (C_EXT)
Component Time Remaining on Extension (C_EXT_RMNG)

Component Extension Authorization (C_AUTH)

(1) Component Attributes.

****

Element name : C_NAME
Format : Alphanumeric
No. Characters : 15

Description : The official name of the comoonent.

Range of Values : NA
Example : Retention A

****

Element name : C_SER_NUM
Format : Alphanumeric
No. Characters : 15

Description : Used to identify each comoonent, assembly, or section of a comoonent. Obtained from the comoonent Scneduled Removal Component card. (SRC)

Range of Values : NA
Examole : SPD-992316

****

Element name : C_PART_NUM
Format : Alphanumeric
No. Characters : 15

Description : The technical part no. of the comoonent as stated on the component SRC.

Range of Values : NA
Examole : 996 25-5312

****

Element name : C_TSO
Format : Numeric
No. Characters : 5

Description : The time the aircraft comoonent has accrued since the baseline time obtained from the SRC card.

Range of Values : 00000-99999
Examole : 00528

****

Element name : C_INT

Format : Numeric
No. Characters : 4

Description : The required replacement interval of a component measured in whole flight hours.

Range of Values : 0000-9999
Example : 2000

****

Element name : C_EXT
Format : Numeric
No. Characters : 3

Description : The allowable entension interval of a comoonent measured in whole flight hours.

Range of Values : 000-999
Examole : 200

****

Element name : C_T_RMNG
Format : Numeric
No. Characters : 4

Description : The number of hours remaining until an extension is required. It is computed by subtracting the daily flight time from the base flight time. The base is then uocated to reflect the change.

Range of Values : 0000-9999
Examole : 2000

****

Element name : C_EXT_RMNG
Format : Numeric
No. Characters : 3

Description : The number of nours remaining until an extension is exhausted.

Range of Values : 000-999
Examole : 200

****

Element name : C_AUTH
Format : Numeric
No. Characters : 1

Description : A Flag to indicate wnether an extension is allowable on a particular comoonent. 1=yes 0=no

Range of Values : 0,1
Example : 1

****

d. Inspection Entity

****

Entity name : Inspection

Description : Required scheduled maintenance to be performed on the detachment aircraft.

Aliases : Calendar Inspection, Phase Inspection
Attributes : Inspection Name (I_NAME)
Inspection Type (I_TYPE)
Inspection Interval (I_INT)
Inspection Time Remaining Until Due (I_T_RMNG)
Inspection Days Remaining Until Due (I_D_RMNG)
Inspection Extension Interval (I_EXT)
Inspection Time Remaining on Extension (I_TEXT_RMNG)
Inspection Days Remaining on Extension (I_DEXT_RMNG)
Inspection Extension Authorization (I_AUTH)

(1) Inspection Attributes.

****

Element name : I_NAME
Format : Alphanumeric
No. Characters : 15

Description : The name of the inspection.

Range of Values : NA
Example : PHASE A

****

Element name : I_TYPE
Format : Alphanumeric
No. Characters : 1

Description : A one-character indicator as to whether the inspection's interval is calendar based (C), flight hour based (F), or

one-time (O).

Range of Values : C,F,O
Example : F

****

Element name : I_INT
Format : Alphanumeric
No. Characters : 5

Description : Describes the required interval within which the inspection must be performed. This may be either a number of days, or a number of flight hours. If it is based on days, the letter D should appear after the number.

Range of Values : NA
Example : 14D, 200

****

Element name : I_EXT
Format : Numeric
No. Characters : 5

Description : The allowable extension interval of an inspection measured in flight hours or days. Interval indicated is - - amount.

Range of Values : NA
Example : 2D, 10

****

Element name : I_T_RMNG
Format : Numeric
No. Characters : 3

Description : The number of hours remaining until an extension is required. It is computed by subtracting the daily flight time from the base flight time. The base is then updated to reflect the change. Used only with "F" inspections.

Range of Values : 000-999
Example : 200

****

Element name : I_D_RMNG
Format : Alphanumeric
No. Characters : 3

Description : The number of days remaining until an inspection must be performed. Used only with "C" inspections.

Range of Values : NA
Example : 5D

****

Element name : I_TEXT_RMNG
Format : Numeric
No. Characters : 3

Description : The number of hours remaining until an extension is exhausted. Used with "F" type inspections.

Range of Values : 000-999
Example : 020

****

Element name : I_DEXT_RMNG
Format : Alphanumeric
No. Characters : 3

Description : The number of days remaining until an extension is exhausted. Used with "C" type inspections.

Range of Values : NA
Example : 3D

****

Element name : I_AUTH
Format : Numeric
No. Characters : 1

Description : A Flag to indicate whether an extension is allowable on a particular inspection.
1=yes 0=no

Range of Values : 0, 1
Example : 1

****

e. Ordnance Entity

****

Entity name : Ordnance

Description : Any of a number of aircraft-launched expendable devices used by the aircrew. Includes sonobuoys, Cartridge Activated Devices (CAD), and Sound Underwater Signals (SUS).

Aliases :
Attributes : Ordnance Name (ORD_NAME)
Ordnance Number Onboard (ORD_NO_OB)
Ordnance Expended (ORD_EXP)
Ordnance Expended Date (ORD_EXP_DATE)

(1) Ordnance Attributes.

****
Element name : ORD_NAME
Format : Alphanumeric
No. Characters : 20

Description : The name and type of the ordnance.

Range of Values : NA
Example : SSQ-41 SONOBUOY
****
Element name : ORD_NO_OB
Format : Numeric
No. Characters : 4

Description : The total of the type indicated above currently. Updated with each expenditure or addition.

Range of Values : 0000-9999
Example : 0324
****
Ordnance Expended Date (ORD_EXP_DATE)
Element name : ORD_EXP
Format : Numeric
No. Characters : 3

Description : The total expended in one 24-hr. period of type ordnance indicated above.

Range of Values : 000-999
Example : 033
****
Element name : ORD_EXP_DATE
Format : Numeric
No. Characters : 4

Description : The Julian date of the ordnance recorded expended in ORD_EXP.

Range of Values : Y: 0-9; DDD: 001-365
Example : 3321

4. Supply Entities

The source for supply information is NAVSUP P-485 Afloat Supply Manual.

a. Requisition Entity

****

Entity name : Requisition

Description : A document submitted for procurement of various items consumed or used by the detachment. The Navy standard form for requisitions is the DD form 1348. Requisition information is used to charge detachment and squadron accounts, to track squadron funds, and to track critical support items.

Aliases :

Attributes : Document Number (DOC_NUM)
Nomenclature (NOMEN)
National Item Identification Number (NIIN)
Unit (UNIT)
Quantity (QTY)
Project Code (CODE)
Requisition Status (STATUS)
Equipment Operational Code (EOC)
Fund Code (FC)
Requisition Cost (COST)

(1) Requisition Attributes.

****

Element name : DOC_NUM
Format : Alphanumeric
No. Characters : 16

Description : The unique identifier of the requisition composed of 3 separate fields: 1) a field identifying the UIC whose OPTAR funds will be charged; 2) the Julian Date of the requisition; and 3) the document serial number prescribed by local numbering policy.

Range of Values	:	NA
Example	:	V20052-3033-G100 (V indicates Atlantic Fleet, 20052 the charged UIC, 3033 2 February 83, and G100 the serial number assigned by the ship.)

****

Element name	:	NOMEN
Format	:	Alphanumeric
No. Characters	:	20
Description	:	The technical name for the good procured.
Range of Values	:	NA
Example	:	BEARING

****

Element name	:	NIIN
Format	:	Numeric
No. Characters	:	11
Description	:	The National Item Identification Number of the good procured.
Range of Values	:	NA
Example	:	00-725-1212

****

Element name	:	UNIT
Format	:	Alphanumeric
No. Characters	:	10
Description	:	The prescribed unit of the above NIIN.
Range of Values	:	NA
Example	:	GAL (gallon)

****

Element name	:	QTY
Format	:	Numeric
No. Characters	:	4
Description	:	The number of units procured.
Range of Values	:	0000-9999
Example	:	0375

****

Element name	:	CODE
Format	:	Alphanumeric
No. Characters	:	3
Description	:	The project code of the item procured. Codes from P-485.

Range of Values : NA
Example : ZA9

****

Element name : STATUS
Format : Alphanumeric
No. Characters : 20

Description : Coded status of the requisition. Status indicates whether requisition is being processed, by whom, or if it has been referred, date referred, etc. Codes from P-485.

Range of Values : NA
Example : 035/BA/018

****

Element name : EOC
Format : Alphanumeric
No. Characters : 3

Description : Equipment Operational Code as determined from the Mission Essential Subsytem Matrix (MESM) for the SH-2F.

Range of Values : NA
Example : Z57

****

Element name : FC
Format : Alphanumeric
No. Characters : 2

Description : The code for the fund charged by the requisition.

Range of Values : NA
Example : 7B

****

Element name : FC
Format : Numeric
No. Characters : 8

Description : The dollar value of the item procured.

Range of Values : 000000.01-999999.99
Example : 375.00

5. Training Entities

a. Aircrew Exercise Entity

****

Entity name : Aircrew Exercise

Description : In order to obtain and retain proficiency and warfare readiness, aircrews are required to complete a minimum number of warfare exercises involving predefined scenarios. The scenarios are defined by Functional Wing Readiness manuals. The minimum requirements for successful completion of those exercises, as well as the matrix for determining Readiness status are also outlined in this manual. The source for these entities was COMHELSEACONWING ONE's Training and Readiness.

Aliases :

Attributes : Exercise Name (EX_NAME)
Exercise Date (EX_DATE)
Exercise Type (EX_TYPE)
Exercise Observer Type (EX_OBS_TYPE)
Exercise Pilot-in-Command (EX_PIC)
Exercise Copilot (EX_CP)
Exercise Aircrewman (EX_AC)
Exercise Total Flt. Time (EX_FLT_T)
Exercise Expiration Date (EX_EXP)

(1) Aircrew Exercise Attributes.

****

Element name : EX_NAME
Format : Alphanumeric
No. Characters : 10

Description : The title of the exercise as determined in the Readiness Manual. May be a coded name.

Range of Values : NA
Example : A-44-UC

****

Element name : EX_DATE
Format : Alphanumeric
No. Characters : 8

Description	:	Date of the exercise described in numerical form MM/DD/YY (Month/Day/last two digits of the year.)
Range of Values	:	Month: 01-12 Day: 01-31 Year: 00-99
Example	:	05/27/85 (27 May 85)

****

Element name	:	EX_TYPE
Format	:	Alphanumeric
No. Characters	:	6
Description	:	Exercises required fall into four general categories: ASW, ASST, MOB, CCC depending on which warfare skills they emphasize and whether they are Traexs (T) or Selexes (S).
Range of Values	:	"ASW", "ASST", "MOB", "CCC", T, S
Example	:	ASW-S, MOB-T

****

Element name	:	EX_OBS_TYPE
Format	:	Alphanumeric
No. Characters	:	1
Description	:	Exercises require a particular level of observer depending on the exercise. These levels are determined in the Readiness Manual: Q: Wing Approved; S: Wing Designated representative, CO, SWO qualified representative, or TAO; T: Officer-in-Charge or squadron designated representative.
Range of Values	:	Q, S, T
Example	:	Q

****

Element name	:	EX_PIC
Format	:	Alphanumeric
No. Characters	:	15
Description	:	The last name of the pilot in command for the exercise.
Range of Values	:	NA
Example	:	Smith

****

Element name	:	EX_CP
Format	:	Alphanumeric
No. Characters	:	15

Description	:	The last name of the copilot for the exercise.
Range of Values	:	NA
Example	:	Lee

****

Element name	:	EX_AC
Format	:	Alphanumeric
No. Characters	:	15
Description	:	The last name of the aircrewman for the exercise.
Range of Values	:	NA
Example	:	Johnston

****

Element name	:	EX_FLT_T
Format	:	Alphanumeric
No. Characters	:	4
Description	:	The total flight time logged for the exercise. Only for exercises where actual flying was performed.
Range of Values	:	00.0-99.9
Example	:	2.5

****

Element name	:	EX_EXP
Format	:	Alphanumeric
No. Characters	:	8
Description	:	Expiration date of the exercise described in numerical form MM/DD/YY (Month/Day/last two digits of the year.) Expiration dates are dependent on the type of exercise, S or T. Selexes are good for one year; Traexs, for 6 months.
Range of Values	:	Month: 01-12 Day: 01-31 Year: 00-99
Example	:	06/12/83

****

b. Ground Training Entity

****

Entity name	:	Ground Training

Description : Training conducted with the detachment to further professional development. Requirements determined by parent squadron.

Aliases :
Attributes : Training Type (TR_TYPE)
Training Date Conducted (TR_DATE)
Training Conductor (TR_COND)
Training Attendees (TR_ATT)
Training Total Time (TR_TIME)

(1) Ground Training Attributes.

****

Element name : TR_TYPE
Format : Alphanumeric
No. Characters : 20

Description : The general classification of the training conducted.

Range of Values : NA
Example : Plane Captain

****

Element name : TR_DATE
Format : Alphanumeric
No. Characters : 8

Description : The date the training was conducted described in numerical form MM/DD/YY (Month/Day/last two digits of the year.)

Range of Values : Month: 01-12
Day: 01-31
Year: 00-99
Example : 09/12/84

****

Element name : TR_COND
Format : Alphanumeric
No. Characters : 20

Description : The last name of the person conducting the training.

Range of Values : NA
Example : Holmes

****

Element name : TR_ATT
Format : Alphanumeric
No. Characters : 100

Description : The last names of those detachment members attending the training.

Range of Values : NA
Example : Holmes, Smith, Jones, Blankenship

****

Element name : TR_TIME
Format : Alphanumeric
No. Characters : 4

Description : The total number of hrs. of training conducted per session. Reported as hours and tenths of hours.

Range of Values : 00.0-99.9
Example : 25.6

6. Other Entities

a. Date Entity

****

Entity name : Date

Description : The particular time at which something happens. A combination of days, months and years that define when the event occurred or is to occur.

Aliases :
Attributes : Calendar Date (CAL_DATE)
Julian Date (JUL_DATE)
Date-Time Group (DTG)
System Date (SYS_DATE)

(1) Date Attributes.

****

Element name : CAL_DATE
Format : Alphanumeric
No. Characters : 8

Description : Date described in numerical form

MM/DD/YY (Month/Day/last two digits of the year.

Range of Values : Month: 01-12
Day: 01-31
Year: 00-99

Example : 12/25/85 (25 December 85)

****

Element name : JUL_DATE
Format : Numeric
No. Characters : 4

Description : Date described in numerical form Y + DDD where Y is the last digit of the year, and DDD is the numerical value of the day on 365 day scale.

Range of Values : Year: 0-9
Day: 001-365

Example : 5359 (25 December 85)

****

Element name : DTG
Format : Alphanumeric
No. Characters : 12

Description : Date described in form DDTTTTZ + Month + YY where DD is the day, TTTT is the time expressed in 24 hour time, Z is the time zone, Month is the three letter abbreviation for the month, and YY is the last two digits of the year.

Range of Values : Year: 00-99
Day: 01-31
Time: 0000-2359
Zone: A-Z
Month: JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC

Example : 232129Z APR 85

****

Element name : SYS_DATE
Format : Alphanumeric
No. Characters : 8

Description : Date described in numerical form MM/DD/YY (Month/Day/last two digits of the year. Current date entered when updating system. May also be expressed as SYS_JD, or the system date converted to Julian form.

Range of Values : Month: 01-12

Day: 01-31
Year: 00-99
Example : 12/25/85 (25 December 85)

****

b. Report Entity

****

Entity name : Report

Description : LAMPS reports contain compiled data obtained over the course of a specified period. A list of the common LAMPS recurring reports is included as Appendix B. If sent as a Naval Message, the report will include attributes of the message header.

Aliases :
Attributes : Report Precedence (PRECEDENCE)
Reporting Addressee (REPORTING_ADDEE)
Action Addressee (ACTION_ADDEE)
Information Addressees (INFO_ADDEE)
Report Classification (CLASS)
Report Name (R_NAME)
Report Reference (REF)
Specific Data fields

The data fields are defined in App. B as well as the source of the data.

****

c. USER Entity

****

Entity name : USER

Description : Anyone authorized to access the system to process, review or update.

Aliases :
Attributes : USER Name (USER_NAME)
USER Identification (USER_ID)

****

(1) USER Attributes.

****

Element name : USER_NAME
Format : Alphanumeric
No. Characters : 15

Description : The legal last name of the user.

Range of Values : NA
Example : Herrmann

****

Element name : USER_ID
Format : Numeric
No. Characters : 9

Description : The user's social security number.

Range of Values : 000000000-999999999

d. Reminder Entity

The Reminder is a user defined entity. The user specifies the event he would like to be reminded of, the date, and the number of warning days ahead he would like the reminders to start. These reminders are updated whenever SYS_DATE is entered until the event is due or the reminder is deleted.

****

Entity name : Reminder

Description : Events defined by type and date used for time management by users.

Aliases :
Attributes : Reminder Name (REM_NAME)
Reminder Date (REM_DATE)
Reminder No. Warning Days (REM_WDAYS)

(1) Reminder Attributes.

****

Element name : REM_NAME
Format : Alphanumeric
No. Characters : 30

Description : A description of the event that the user

wants to be reminded of.

Range of Values : NA
Example : EOQ Due

****

Element name : REM_DATE
Format : Numeric
No. Characters : 8

Description : Date described in numerical form MM/DD/YY (Month/Day/last two digits of year.)

Range of Values : Month: 01-12
Day: 01-31
Year: 00-99
Example : 12/25/85 (25 December 85)

****

Element name : REM_WDAYS
Format : Numeric
No. Characters : 3

Description : The number of days in advance that the user wishes the reminders to begin on a desired event.

Range of Values : 001-364
Example : 014

V. CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

This thesis has presented a requirements analysis for a microcomputer system designed to help automate the tedious and error-prone task of compiling and maintaining LAMPS detachment administrative data. It has presented a logical view of the data that the typical detachment is tasked with collecting and processing, and has proposed the functions that such an automated system should serve. This data is essential to higher authority who must account for the detachment. Therefore, a system which can improve data integrity while reducing the burden on the detachment so that it can better perform its primary mission is critical and should be implemented as soon as possible.

1. User vs. Analyst Views

Throughout the development of the project, however, the author has been continually evaluating whether the "right" system has been proposed, and has tried to avoid becoming what Barry Boehm calls a "computer basket weaver", an analyst who "weaves" a system, losing sight of the end user desires and user compatability. As a previous practitioner of the manual methods now used by detachments, both as a Maintenance Officer and Officer-in-Charge, the author has played a dual role in the project as both user and systems analyst. As a user, the primary drivers were

system usefulness and applicability. As an analyst, expandability, maintenance, and system structure were important considerations. There are design features presented which should satisfy both points of view.

The system must save the user time and reduce repetition if it is to be used. Functional breakdowns were made assuming user-friendliness will be a major consideration in detailed design. The system prompts the user for information into pre-established data fields, and uses data from various databases to reduce repetitive key strokes.

The functions have also been arranged with expandability and ease of maintenance features in mind. The design is modular so that structured detailed design can be used for independent coding and testing. Two functions, "Create databases" and "Review/Update reports" have been included so that the user with some programming experience may tailor the system to his individual needs.

2. Ad Hoc Queries

It would be a trivial application to use a powerful microcomputer to merely add up totals in compiled reports. Recent reductions in the sales of "home" computers have demonstrated that a pencil is still the tool of choice when balancing a checkbook. The system should not create extra burden for the detachment. Inevitably, users must learn to trust the electronic system as the primary means of data manipulation before it becomes more than a double-entry

nuisance. As a database system, ad hoc queries of the data would be possible. This feature has not been formally defined in this work because specific menu-driven queries would be very limiting in this application. If the system were coded in an off-the shelf DBMS like dBase II[1], a skilled user would be able to query the databases in any application he chooses. For example, a user may wish to know during how many flights, and on which days within a specified period, was ASW the primary purpose of the flight? Using dBASE II, he would enter the FLIGHT database and query:

```
LIST FOR FPC="ASW" AND FLT_JD >3250 AND FLT_JD<3300
   FIELD FLT_ID
```

This would yield a list of flight identifiers from which the user could determine the information he sought. Clearly, many queries could be similarly conducted.

B. RECOMMENDATIONS

The need for an automated data processing system for LAMPS detachment has been well documented and the system should be implemented as soon as possible. Some recommendations as to system design:

1. System should be coded in dBASE II or III.

   These DBMSs offer data file creation features, relative programming ease, query language, and large capacities. In addition, the software is

---

1 dBASE II and dBASE III are registered trademarks of Ashton-Tate, Inc.

widely used and well supported. Many users may be already familiar with them, as dBASE II is being issued as standard software to some squadrons.

2. System should be designed for use on a hard-disk based hardware system for more rapid responsiveness and greater capacity for records.

3. A maintenance data system should be designed.

There is a large volume of maintenance data generated for the 3M system.. This data was not considered in this thesis as its inclusion would merely repeat the existing system. Currently, 3M data is mailed to the parent squadron and manually input in the 3M system by an analyst. With a compatible system at-sea, detachments would only have to mail completed disks, thus eliminating manual input.

APPENDIX A

SAMPLE INTERVIEW QUESTIONS

The following questions were used to determine user requirements for the reporting system application. They were presented during in-person interviews with members of HSL-35 and HSL-33, and during telephone conversions with members of HSL-32 and HSL-34. The respondents were primarily experienced Officers-in-Charge and Maintenance Officers.

1. What is your level of at-sea LAMPS experience ?

2. Approximately what percentage of your crew's time at sea is spent record-keeping and preparing reports ?

3. Have you devised any methods to try to streamline this workload ?

4. Have you ever used a micro-computer on detachment ? Which one ?

5. What did you find you could do more efficiently with a micro-computer ?

6. What is your level of computer experience ?

7. Did any of the other detachment members have computer experience ?

8. Would you like to see micro-computers issued to all LAMPS detachments ?

9. In what ways do you think using a micro-computer would benefit the detachment ?

   For maintenance ?
   For flight operations ?
   For personnel administration ?
   For training ?

10. Could you briefly outline the current system for record-keeping and reporting that you used on your last detachment ?

11. How did you maintain the integrity of your data ? What type of error checking scheme did you use, if any ?

12. How much time would you be willing to devote to training your detachment to use the computer effectively ?

13. Have you noticed a command emphasis on the use of micros on detachment ? In the squadron ?

14. Finally, do you think an automated data base system run on a micro-computer will be beneficial to detachment operations ?

APPENDIX B

LIST OF LAMPS RECURRING REPORTS

The following list represents the recurring reports required of most deployed detachments. Individual squadron and detachment directives may require different data fields than those listed.

The data fields are described by name and source entity. Where the source entity is indicated by "user", it means the data is user provided. For sources indicated as the report names themselves, it means information recurs in all reports and is obtained from archived reports in the reports file.

****

Report name : Aircraft Custody Change/Status (XRAY)
Reference : OPNAVINST 5442.2E
Periodicity : as required

Description : Reports aircraft inventory change. XRAY is normally prepared by the reporting custodian and transmitted to the controlling custodian. Information compiled from flight, maintenance, and personnel records, and from user provided information.

Data Fields

NAME	SOURCE
1. PRECEDENCE	XRAY
2. REPORTING_ADDEE	XRAY
3. ACTION_ADDEE	XRAY
4. INFO_ADDEES	XRAY
5. CLASS	XRAY
6. AC_CC_NAME	AIRCRAFT
7. R_NAME	XRAY
8. DET_NAME	DETACHMENT
9. Report serial number (XRAY_SER_NO)	XRAY
10. REF	XRAY
A. AC_BUNO	AIRCRAFT
B. AC_PUC	AIRCRAFT
C. XRAY Action Date (XRAY_ACT_DATE)	USER
D. XRAY Action Code (XRAY_ACT_CODE)	USER
E. XRAY Status Code (XRAY_STAT)	USER
F. AC_MOD	AIRCRAFT

NOTE: Each XRAY must contain an entry in data items A through H and M. All other entries are as applicable as determined from the applicability matrix contained in the reference.

G.	AC_PER_NUM (if applicable)	AIRCRAFT
H.	AC_PED (if applicable)	AIRCRAFT
I.	AC_EXT (if applicable)	AIRCRAFT
J.	Strike/damage Code (XRAY_STR_CODE) (if applicable)	USER
K.	Aircraft Acceptance Date (AC_ACC_DATE) (if applicable)	AIRCRAFT
L.	Reserved for future use	
M.	Operating Service Months (AC_OP_MOS) (if applicable)	AIRCRAFT
N.	Estimated Rework Completion Date (XRAY_RWK_DATE) (if applicable)	USER
O.	PUC of unit or rework activity (RWK_PUC) (if applicable)	USER
P.	Unit received from/Command Code (XRAY_RCV) (if applicable)	USER
Q.	Delete/Correct	USER
R.	DET_ORG_CODE (if applicable)	DETACHMENT
S.	Operational Category Code (XRAY_OPCAT) (if applicable)	USER
T.	Fleet Assignment Code (XRAY_FAC) (if applicable)	USER
U.	Mid-Term (if applicable)	USER
V-Z.	Reserved for future use.	
11.	Remarks (XRAY_RMKS) (narrative)	USER

****

****

Report name : Aircraft Accounting Audit Report
Reference : OPNAVINST 5442.2E
Periodicity : 2400 31 August, 30 November, 28/29 February, 31 May

Description : Provides for automatic audit and correction of the controlling custodian and the CNO data banks. Information compiled from flight, maintenance, and personnel records, and from user provided information.

Data Fields

NAME	SOURCE
1. PRECEDENCE	AAAR
2. REPORTING_ADDEE	AAAR
3. ACTION_ADDEE	AAAR
4. INFO_ADDEES	AAAR

5.	CLASS	AAAR
6.	R_NAME (AIRCRAFT ACCOUNTING AUDIT REPORT OPNAV 5442-6)	AAAR
7.	REF (OPNAVINST 5442.2E)	AAAR
8.	DET_NAME	DETACHMENT
9.	DET_PUC	DETACHMENT
10.	QUARTER_END_DATE	USER
11.	Items C,D,E,F,G,H,I,J,K,L (if applicable),M	
	C. AC_BUNO	AIRCRAFT
	D. XRAY_ACT_DATE	XRAY
	E. XRAY_STAT	XRAY
	F. AC_MOD	AIRCRAFT
	G. AC_PER_NUM	AIRCRAFT
	H. AC_PED	AIRCRAFT
	I. AC_EXT_NUM	AIRCRAFT
	J. Flying Hours in Period = old AC_PER_HRS + sum reporting period beginning date (FLT_TOT_HRS) to reporting period end date. Whole hours only, no roundup.	AIRCRAFT/ FLIGHT
	K. Flying Hours in Life = sum all previous periods plus current period computed in J.	AIRCRAFT/ FLIGHT
	L. "D" or "C" (delete/correct)	USER
	M. always 09	AAAR

****

****

Report name : Engine Transaction Report (ETR)
Reference : COMNAVAIRLANT/COMNAVAIRPAC INST 13720.3K
Periodicity : as required

Description : Reports changes in aircraft engine status/location. Reporting Custodians submit to Controlling Custodians. Information compiled from flight, maintenance, and personnel records, and from user provided information.

Data Fields

	NAME	SOURCE
1.	PRECEDENCE	ETR
2.	REPORTING_ADDEE	ETR
3.	ACTION_ADDEE	ETR
4.	INFO_ADDEES	ETR
5.	CLASS	ETR
6.	R_NAME "ENGINE TRANSACTION	ETR

REPORT (NAVAIR 13700-2)"

7.	REF	ETR
8.	DET_NAME	DETACHMENT
9.	"ETR"	ETR
10.	ETR serial number (CURR_ETR_SER_NO)	USER
11.	"LAST ETR"	ETR
12.	Last ETR serial number and DTG of message (LAST_ETR_SER_NO)	ETR
13.	Transaction	
	a. Transaction serial number (ETR_TRANS_NO)	USER
	b. ENG_SER_NUM	ENGINE
	c. Status-STAR code (ETR_STAT)	USER
	d. Julian date of the ETR transaction (ETR_JD)	USER/ SYS_DATE
	e. ENG_MOD	ENGINE
	f. ENG_SER	ENGINE
	g. DET_UIC	DETACHMENT
	h. ENG_TSN = old ENG_TSN + sum since last report date (FLT_TOT_HRS).	ENGINE/ FLIGHT

NOTE: Transaction items a-g are required for all reports. The others are required as a result of a particular Star-Status combination as outlined in 13700.9K

	i. Reporting Custodian rcvd from/ transferred to UIC (ETR_RCTRANS_UIC) (if required)	USER
	j. New Controlling Custodian transferred to UIC (ETR_CCTRANS_UIC) (if required)	USER
	k. AC_MOD (if required)	AIRCRAFT
	l. AC_BUNO (if required)	AIRCRAFT
	m. ENG_POS (if required)	ENGINE
	n. Reason for removal code (ETR_REM_CODE) (if required)	USER
	o. QECA configuration (ETR_QECA) (if required)	USER
	p. BCM/AWM/INSP code (ETR_BCM_CODE) (if required)	USER
	q. Location Code UIC (ETR_LOC_UIC) (if required)	USER
	r. Job Control Number (ETR_JCN) (if required)	USER
14.	Remarks (ETR_RMKS) (Narrative)	USER

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Report name : End of Quarter (EOQ) Report

Reference : COMNAVAIRLANT/COMNAVAIRPAC INST 13720.7

Periodicity : 2400 28/29 February, 31 May, 31 July, and 30 November.

Description : To provide quarterly audit of all engines under Controlling Custodian's control. Reporting Custodian transmits to Controlling Custodian. Information compiled from flight, maintenance, and personnel records, and from user provided information.

Data Fields

NAME	SOURCE
1. PRECEDENCE	EOQ
2. REPORTING_ADDEE	EOQ
3. ACTION_ADDEE	EOQ
4. INFO_ADDEES	EOQ
5. CLASS	EOQ
6. R_NAME "END-OF-QUARTER (EOQ) REPORT (NAVAIR 13700-2)"	EOQ
7. REF	EOQ
8. "EOQ Report Status-STAR 11-90"	EOQ
9. "EOQ date" (EOQ_JD)	USER/SYS_DATE
10. "Prepared by:"	
a. Name (EOQ_PREP_NAME)	USER
b. Rank/rate (EOQ_PREP_RANK)	USER
c. AUTOVON telephone num. (if required)	USER
11. DET_UIC	DETACHMENT
12. Total aircraft by model in reporting custodian's custody. (EX: ACFT Model: SH-2F, 1)	USER
13. EOQ transaction (for each installed engine):	
a. ENG_SER_NUM	ENGINE
b. ENG_MOD	ENGINE
c. ENG_SER	ENGINE
d. ENG_TSN = old ENG_TSN + sum since last report date (FLT_TOT_HRS)	ENGINE/ FLIGHT
e. AC_MOD	AIRCRAFT
f. AC_BUNO	AIRCRAFT
g. ENG_POS (if required)	ENGINE
14. Remarks (EOQ_RMKS) (Narrative)	USER

****

****

Report name : Aircraft Material Readiness Report

Reference : COMNAVAIRPAC/COMNAVAIRLANT INST 5442.2A

Periodicity : Daily, while deployed, to include at-sea, in port, and shore-based periods.

Description : Provides standard format and procedures for reporting essential near real-time data elements not currently available via 3-M data collection methods. Information compiled from flight, maintenance, supply, and personnel records, and from user-provided data.

Data Fields

NAME	SOURCE
1. PRECEDENCE	AMRR
2. REPORTING_ADDEE	AMRR
3. ACTION_ADDEE	AMRR
4. INFO_ADDEES	AMRR
5. CLASS	AMRR
6. R_NAME "AIRCRAFT MATERIAL READINESS REPORT 5442-14"	AMRR
7. Status/Location	
a. Local DTG of Report (LOC_DTG)	USER
b. present geograonical location (SH_GEO_LOC)	USER
c. (DET_SHIP_NAME)	DETACHMENT
d. (JUL_DATE)	SYS_DATE
e. Next Port call and Julian Date (at sea) (NEXT_PORT, NEXT_PORT_JD or Next Underway Date (NEXT_UWAY_JD) if in port	USER
f. DET_NAME	DETACHMENT
g. AC_MOD	AIRCRAFT
h. AC_STATUS	AIRCRAFT
i. FMC On Board (FM_OB) or FMC Ashore (FM_SH)	USER
j. Mission Capable onboard (MC_OB) or Mission Capable ashore (MC_SH)	USER
k. ASW capable aircraft on board/ashore. (ASW)	USER
l. ASU capable aircraft on board/ashore (Atlantic Fleet detachments only.) (ASU)	USER
m. FMC sorties (FMC_SOR)	USER
n. Sorties Scheduled (SOR_SCH)	USER
o. Sorties Flown. (SOR_FLN)	USER
p. Flight Hours (for current month rounded to nearest whole hour.) (FH = sum FLT_TOT_HRS from beginning of month until report date.)	FLIGHT/ SYS_DATE
q. NMC Requisitions Outstanding (NMC_RQN)	SUPPLY
r. PMC Requisitions Outstanding	SUPPLY

(PMC_RQN)

8.	Capability Logistics Summary	
a.	percent mission capable/ percent full mission capable/ percent ASW capable (MC_PCT, FMC_PCT, ASW_PCT)	USER
9.	Outstanding Requisitions (significant)	
a.	NOMEN	SUPPLY
b.	DOC_NUM	SUPPLY
c.	NIIN	SUPPLY
d.	QTY	SUPPLY
e.	CODE	SUPPLY
f.	STATUS Transaction Date/Status code/Activity /Estimated Shipping Date	SUPPLY
g.	EOC	SUPPLY
10.	Significant Maintenance Support Problems (MAINT_NARR (narrative))	USER
11.	Aircraft Down time (NMC_HRS)	USER
12.	Declassification Date (JUL_DATE +6 Mos.)	SYS_DATE

****

The Ten day feeder format is prescribed by the detachment's parent squadron and, although all squadrons require the report, the format is not uniform fleet-wide. Therefore, the entries will not be included in the data dictionary. The following is the format used by HSL-35 and is representative of the information required by LAMPS squadrons.

****

Report name : Ten Day Feeder Report

Reference : Individual squadron instruction, derived from OPNAVINST 7310

Periodicity : 2400 each ten days at sea, as required when in port or shorebased.

Description : The Ten day feeder is used by parent squadrons to monitor funds spent by the detachments for fuel, consumables, and repairable items. Flight operation information is provided to find a cost/flight ratio for budgeting use. Information is compiled from flight, supply, and maintenance records, and user provided data.

Data Fields

NAME	SOURCE
1. PRECEDENCE	10 DAY FEED.
2. REPORTING_ADDEE	10 DAY FEED.
3. ACTION_ADDEE	10 DAY FEED.
4. INFO_ADDEES	10 DAY FEED.
5. CLASS	10 DAY FEED.
6. Subject	
a. DET_NAME (HSL-35 Det 3)	10 DAY FEED.
b. R_NAME "OPNAVREPORT 7310-1"	10 DAY FEED.
c. Period of report (inclusive dates)	USER
7. "OPS SUMMARY"	
a. Flight Hours	
1. 10 Day	
a. Day (sum of FLT_TOT_HRS within report period dates.)	FLIGHT
b. Night (sum of HAC_NT_HRS within report period dates.)	FLIGHT
2. Month	
a. Day (sum of FLT_TOT_HRS within month beginning date and report date.)	FLIGHT
b. Night (sum of HAC_NT_HRS within month beginning date and report date.)	FLIGHT
8. "GAL FUEL CONSUMED"	
a. 10 Day	SUPPLY
b. Month	SUPPLY
9. Funds expended.	
a. 7B funds consumed. AC_TEC/ NOMEN/ SOURCE UIC/ QTY/ COST/ DOC_NUM (each instance)	SUPPLY
b. 9J funds consumed. QTY/ DOC_NUM/ SOURCE UIC/ COST (each instance)	SUPPLY
c. 7F funds consumed. DOC_NUM/ COST/ AIRCREW (each instance)	SUPPLY
d. WA funds consumed. DOC_NUM/ COST (each instance)	SUPPLY
10. Remarks: (narrative)	USER
11. Registered mail and tech. pubs recvd. (narrative)	USER
12. Aircraft availability	USER
a. Hrs. FMC (Full Mission Capable)	
b. Hrs. PMC (Partial Mission Capable)	
c. Hrs. NMC (Not Mission Capable)	
d. Outstanding Pri 2 requisitions: DOC_NUM/ NOMEN	SUPPLY

The CRUISEREP is a status report distributed by the detachment monthly. It reports detachment activity in flight, training, maintenance, safety, and operations, and serves as a "newsletter" for the detachment. All squadrons have a requirement for this report but directives vary as to its contents. Information is compiled from records in all areas, and user supplied information. The following is an example from HSL-32.

****

Report name : CRUISEREP
Reference : squadron instruction
Periodicity : monthly, while deployed

Description : Provides detachment statistics and a general update of detachment activity for historical purposes.

Data Fields

NAME	SOURCE
1. PRECEDENCE	CRUISEREP
2. REPORTING_ADDEE	CRUISEREP
3. ACTION_ADDEE	CRUISEREP
4. INFO_ADDEES	CRUISEREP
5. CLASS	CRUISEREP
6. R_NAME (DET_NAME "CRUISEREP" for month/yr	CRUISEREP/ USER
7. Period of Report	USER
8. DET_RED_STAT	DETACHMENT
9. Deployment Statistics	
a. Days at sea	USER
b. Days in port	USER
c. Days round-the-clock ops	USER
d. Days shorebased.	USER
10. Flight data summary	
a. Number of flights	FLIGHT
1. Day	
2. Night	
b. Total Hours	FLIGHT
1. Day (sum FLT_TOT_HRS over report period)	
2. Night (sum NAC_NT_HRS over report period)	
c. Sorties	AMRR
1. Sorties scheduled (sum SOR_SCH over period)	
2. Sorties flown (sum SOR_FLN over period)	
3. Percentage (SOR_FLN/SOR_SCH * 100)	CRUISEREP
d. Ship landings	FLIGHT

1. Day (sum TOT_LD_1 over report per.)
2. Night (sum TOT_LD_A over report per.)

e. Field landings — FLIGHT
1. Day (sum TOT_LD_6 over report per.)
2. Night (sum TOT_LD_F over report per.)

f. Shorebased flight time — USER
1. Day
2. Night

g. Pilot qualifications — PILOT/FLIGHT
(for each detachment pilot)
1. Total flight time (old P_TOT + sum HAC_FP_HRS + CP_FP_HRS over report period)
2. P_FYP
3. P_FYN
4. P_FYA
5. P_FYS

h. Pilot time for report period — PILOT/FLIGHT
1. Pilot time (sum HAC_FP_HRS + HAC_CP_HRS, or CP_FP_HRS + CP_CP_HRS if not HAC over report period.
2. Night time (sum HAC or CP _NT_HRS over report period.
3. P_SAN
4. DLQ expiration date — PILOT
   a. P_DDLQ
   b. P_NDLQ

10. Mission/Sortie breakdown

a. ASW flight hours — FLIGHT
1. Day (sum ASW_HRS_D for report period)
2. Night (sum ASW_HRS_N for report period)

b. ASST flight hrs. — FLIGHT
1. Day (sum ASST_HRS_D for report period)
2. Night (sum ASST_HRS_N for report period)

c. Training flight hours — FLIGHT
1. Day (sum TRG_HRS_D for report period)
2. Night (sum TRG_HRS_N for report period)

d. Utility flight hours — FLIGHT
1. Day (sum UT_HRS_D for report period)

2. Night (sum UT_HRS_N for report period)
3. No. of passengers (sum NO_PAX)
4. Pounds of cargo (sum LBS_CGO)
5. Self-lift

e. Functional check flight hours — FLIGHT
1. Day (sum FCF_HRS_D for report per.)
2. Night (sum FCF_HRS_N)

f. Other flight hours — USER
1. Day
2. Night

11. ASW data

a. ASW search time — RAINFORM PURP.
1. Day
2. Night

b. ASW contact time — RAINFORM PURP.
1. Day
2. Night

c. Contacts — RAINFORM PURP.
1. Number
2. Type
3. Hrs. held

d. Exercise torpedoes — RAINFORM PURP.
1. FY
2. Month

e. Simulated attacks (.no)

12. Coordinated air operations (narrative) — USER

13. Hrs. of multi-LAMPS operations. — USER

14. Training data

a. Qualifications — PILOT/AIRCREW/MEMBER
1. Due
2. Overdue
3. Comoleted

o. Training completed (man hrs) — GROUND TRAIN.
1. Total (TR_TIME of all types with TR_DATE within report period.)
2. Professional (TR_TIME of type "Professional" with TR_DATE within report period.)
3. OJT (TR_TIME of type "OJT" with TR_DATE within report period.)
4. Corrosion (TR_TIME of type "Corrosion" with TR_DATE within report period.)
5. Plane Captain (TR_TIME of type "Plane Captain" with TR_DATE

within report period.)
6. Cross-rate (TR_TIME of type "Cross-rate" with TR_DATE within report period.)
7. GMT / Damage Control (TR_TIME of type "GMT/Damage Control" with TR_DATE within reporting period.

c. Narrative — USER
d. Exercises completed (for each exercise)
1. EX_NAME — AIRCREW EX.
2. EX_DATE
3. Participating crew
a. EX_PIC
b. EX_CP
c. EX_AC
e. Ship/fleet exercise summary: (narrative) — USER
f. Individual flight crew member readiness status (for each member) — PILOT/AIRCREW
1. P_NAME and P_RANK or AC_NAME and AC_RATE
2. P_READ or AC_READ
g. Torpedo exercises completed — USER

15. Tac D&E submissions this calendar year — USER
a. Tacmemos
1. Title
2. Date submitted
b. Tacfacs
1. Title
2. Date submitted
c. Lessons Learned
1. Title
2. Date submitted.
d. Other

16. Maintenance Data — USER
a. Narrative
b. Supply/AIMD support narrative

(NOTE: mission capability percentages are compiled from VIDS/MAF summaries of EOC impacted maintenance activity. Data kept by maintenance crew.
c. Percentage
1. FMC
2. PMCM
3. PMCS
4. NMCM
5. NMCS
d. Hours

1. FMC
2. Scheduled PMCM
3. Unsched. PMCM
4. Sched. NMCM
5. Unsched. NMCS

e. Corrosion (hours)
1. SAF
2. MAF

17. Safety — USER
a. Significant incidents narrative
b. Lessons learned narrative

18. Noteworthy Accomplishments (Narrative) — PILOT/AIRCREW/MEMBER

19. Ship's schedule (next month) — USER
a. Date
b. Port

20. Officer-in-charge Narrative. — USER

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The Eight O'clock Report is a report presented by the air department head (Officer-in-Charge) to the Ship's Commanding Officer describing the current status of the aircraft and crew. The format varies between detachments, but the elements contained are relatively uniform. The following is from HSL-35 Det 3.

****

Report name : Eight O'clock Report
Reference : Ship's instructions
Periodicity : as required, but usually each evening at sea while deployed.

Description : Provides ship's C.O. with latest status on aircraft, crew, and deployment statistics. Information compiled from flight and maintenance records, and from user-provided information.

Data Fields

NAME	SOURCE
1. DET_NAME	DETACHMENT
2. "Eight O'clock report as of" CAL_DATE/time	8 O'CLOCK/ SYS_DATE/ USER
3. Aircraft status (up/down) (EOC_AC_STAT)	USER
4. Mission status	USER
a. ASW (up/down) (EOC_ASW_STAT)	

1. comments
b. ASST (up/down) (EOC_ASST_STAT)
1. comments
c. Utility status (up/down)
(EOC_UT_STAT)
1. comments
d. SAR status (up/down) (EOC_SAR_STAT)
1. comments

5. Detachment flight hours. FLIGHT
a. Past 24 hours
1. Day (sum FLT_TOT_HRS
over past 24 HRS.)
2. Night (sum HAC_NT_HRS
over past 24 HRS.)
3. Instrument
a. Actual (sum HAC_ACT_HRS
over past 24 HRS)
b. Simulated (sum HAC_SIM_HRS
+ CP_SIM_HRS over past 24 HRS)
4. Own ship landings
a. Day (EOC_OWN_DLDS)
b. Night (EOC_OWN_NLDS)
5. Other ship landings
a. Day (EOC_OTH_DLDS)
b. Night (EOC_OTH_NLDS)
b. Month to date (same as above
summed over period from beginning
of month to present.)

6. Maintenance Data
a. Hrs remaining to inspections INSPECTION
1. Phase " " (I_T_RMNG)
a. estimated date
2. 14 day (I_D_RMNG)
a. estimated date
3. 30 Hour (I_T_RMNG)
a. estimated date .
4. 50 Hour (I_T_RMNG)
a. estimated date
b. Hrs remaining on High-time COMPONENT
components (each component)
1. Component name (C_T_RMNG)
a. estimated date USER
b. estimated down time USER

7. Ordnance expenditures ORDNANCE
a. MK 25 MLM
1. ORD_OB/ ORD_EXD/ ORD_EXM
b. Mk 58 MLM
1. ORD_OB/ ORD_EXD/ ORD_EXM
c. Mk 64 SUS
1. ORD_OB/ ORD_EXD/ ORD_EXM
d. Mk 84 SUS

1. ORD_OB/ ORD_EXD/ ORD_EXM

e. Mk 46 TORPEDO
   1. ORD_OB/ ORD_EXD/ ORD_EXM

f. JAU 1 B CAD
   1. ORD_OB/ ORD_EXD/ ORD_EXM

g. SSQ 36
   1. ORD_OB/ ORD_EXD/ ORD_EXM

h. SSQ 41
   1. ORD_OB/ ORD_EXD/ ORD_EXM

i. SSQ 47
   1. ORD_OB/ ORD_EXD/ ORD_EXM

j. SSQ 53
   1. ORD_OB/ ORD_EXD/ ORD_EXM

8. Flight crew status (EOC_FC_STAT)
9. Comments (narrative)

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The RAINFORM PURPLE is the daily flight summary of the detachment. It is a CONFIDENTIAL report, and its data fields will not be described here.

****

Report name : RAINFORM PURPLE

Reference : OPNAVINST C3431.1B
CINCPACFLTINST C3431.1C
COMASWWINGSPAC RAINFORM PURPLE DRAFTER'S GUIDE

Periodicity : as required to cover all at-sea flights, usually every 24 hrs at sea.

Description : Provides a summary of at sea flight activity. Used to supplement database for the measurement of aircraft/ship operational performance by higher authority.

****

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